

SEQUENCE LISTING

5 (1) GENERAL INFORMATION

(i) APPLICANT: Bristol-Myers Squibb Co.

10 (ii) TITLE OF THE INVENTION:
A METHOD FOR INHIBITING
IMMUNOGLOBULIN-INDUCED TOXICITY FROM THE USE OF
IMMUNOGLOBULINS IN THERAPY AND IN VIVO DIAGNOSIS

15 (iii) NUMBER OF SEQUENCES: 13

15 (iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Merchant & Gould
(B) STREET: 11150 Santa Monica Blvd., Suite 400
(C) CITY: Los Angeles
(D) STATE: CA
20 (E) COUNTRY: USA
(F) ZIP: 90025

25 (v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Diskette
(B) COMPUTER: IBM Compatible
(C) OPERATING SYSTEM: DOS
(D) SOFTWARE: FastSEQ Version 2.0

30 (vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: PCT/US97/_____
(B) FILING DATE: 01-AUG-1997
(C) CLASSIFICATION:

35 (vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: 60/023,033
(B) FILING DATE: 02-AUG-1996

40 (viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Adriano, Sarah B
(B) REGISTRATION NUMBER: 34,470
(C) REFERENCE/DOCKET NUMBER: 30436.43WOU1

45 (ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 310-445-1140
(B) TELEFAX: 310-445-9031
(C) TELEX:

50 (2) INFORMATION FOR SEQ ID NO:1:

55 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 36 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
5 TGGCACCGAA AGCTTCTGG GGCAGGCCAG GCCTGA 36

(2) INFORMATION FOR SEQ ID NO:2:
10 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 57 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: cDNA
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
20 TCCGGACATG TTGGTACCCA CGTGGTGGTC GACGCTGAGC CTGGCTTCGA GCAGACA 57

(2) INFORMATION FOR SEQ ID NO:3:
25 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 55 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

30 (ii) MOLECULE TYPE: cDNA
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
35 GTCGACCACC ACGTGGGTAC CAACATGTCC GGAGCCACAT GGACAGAGGC CGGCT 55

(2) INFORMATION FOR SEQ ID NO:4:
40 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

45 (ii) MOLECULE TYPE: cDNA
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:
50 CTGGTTCTTG TTCATCTCCT CTCTAGATGG 30

(2) INFORMATION FOR SEQ ID NO:5:
55 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 36 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

ACCATGGTCTG ACCCTCAGACC TGCCAAGAGC CATATC

36

5 (2) INFORMATION FOR SEQ ID NO:6:

10 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 39 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

CATGGTCACG TGGTGTGTCC CTGGATGCAG GCTACTCTA

39

20 (2) INFORMATION FOR SEQ ID NO:7:

25 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 49 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

30 CAGGGAGGGGA GGGTGTCTGC TGGAAAGCCAG GCTCAGCGCT GACCTCAGA

49

(2) INFORMATION FOR SEQ ID NO:8:

35 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 50 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

45 GGAAAGAACC ATCACAGTCT CGCAGGGGCC CAGGGCAGCG CTGGGTGCTT

50

(2) INFORMATION FOR SEQ ID NO:9:

50 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8691 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

55 (ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

55 GACGGATCGG GAGATCTGCT AGGTGACCTG AGGCGCGCCG GCTTCGAATA GCCAGAGTAA
CCTTTTTTTT TAATTTTATT TTATTTTATT TTTGAGATGG AGTTTGGCGC CGATCTCCCG

60

120

	ATCCCCCTATG	GTCGACTCTC	AGTACAATCT	GCTCTGATGC	CGCATAGTTA	AGCCAGTATC	180
	TGCTCCCTGC	TTGTGTGTTG	GAGGTCGCTG	AGTAGTGC	GAGCAAAATT	TAAGCTACAA	240
5	CAAGGCAAGG	CTTACCCGAC	AATTGATG	AGAATCTG	TAGGGTTAGG	CGTTTGC	300
	TGCTTCGCGA	TGTAAGGGCC	AGATATACGC	GTTGACATTG	ATTATTGACT	AGTTATTAAAT	360
	AGTAATCAAT	TACGGGTCA	TTAGTTCAT	GCCCATATAT	GGAGTCCGC	GTTACATAAC	420
	TTACGGTAAA	TGGCCCCCCT	GGCTGACCGC	CCAACGACCC	CCGCCATTG	ACGTCAATAA	480
	TGACGTATGT	TCCCATACTA	ACGCCAATAG	GGACTTCCA	TTGACGTAA	TGGGTGGACT	540
10	ATTACGGTA	AACTGCCAC	TTGGCAGTAC	ATCAAGTGT	TCATATGCCA	AGTACGCC	600
	CTATTGACGT	CAATGACGGT	AAATGGCCCG	CCTGGCATTA	TGCCCAGTAC	ATGACCTTAT	660
	GGGACTTCC	TACTTGGCAG	TACATCTACG	TATTAGTCAT	CGCTATTACC	ATGGTGATGC	720
	GGTTTGGCA	GTACATCAAT	GGGCGTGGAT	AGCGGTTGA	CTCACGGGA	TTTCCAAGTC	780
	TCACCCCCAT	TGACGTCAAT	GGGAGTTTGT	TTTGGCACCA	AAATCAACGG	GACTTTCCA	840
	AATGTCGTA	CAACTCCGCC	QCATTGACGC	AAATGGCGG	TAGGCGTGT	CGGTGGGAGG	900
15	TCTATATAAG	CAGAGCTCTC	TGGCTAACTA	GAGAACCCAC	TGCTTACTGG	CTTATCGAAA	960
	TTAATACGAC	TCACTATAGG	GAGAACCCAG	CTTGGTACCA	ATTAAATTG	ATATCTCCTT	1020
	AGGTCTCGAG	TCTCTAGATA	ACCGGTCAAT	CGATTGGAA	TCTTGC	GCTTGCTAGC	1080
	CACCATGGAG	TTGTGGTAA	GCTGGTCT	TCCTTGTCT	TGTTTAAAGA	GGTGTCCAGT	1140
	GTGAAGTGA	TCTGGTGGAG	TCTGGGGAG	GCTTAGTGC	GCCTGGAGGG	TCCCTGAAAG	1200
20	TCTCCTGTGT	AACCTCTGGA	TTCACTTCA	GTGACTATTA	CATGTTATTG	TTTCGCCAGA	1260
	CTTCAGAGAA	GAGGCTGGAG	TGGGTCGCAT	ACATTAGTC	AGGTGGTGT	ATAACCGACT	1320
	ATCCAGACAC	TGTAAAGGGT	CGATTCCACCA	TCTCCAGAGA	CAATGCCAAG	AACACCCCTGT	1380
	ACCTGAAAT	GAGCCGTCTG	AAGTCTGAGG	ACACAGCCAT	GTATTACTGT	GCAAGAGGCC	1440
	TGACGACGG	GGCCTGGTTT	GCTTACTGGG	GCCAAGGGAC	TCTGGTCACG	GTCTCTGTAG	1500
25	CTAGCACCAA	GGGCCATCG	GTCTTCCCCC	TGGCACCTC	CTCCAGAGC	ACCTCTGGGG	1560
	GCACAGCGGC	CCTGGCTGC	CTGGTC	ACTACTTCCC	CGAACCGGT	ACGGTGT	1620
	GGAACTCAGG	CGCCCTGACC	AGCGCGTGC	ACACCTTCCC	GGTGTCTCA	CAGTCCTCAG	1680
	GACTCTACTC	CCTCAGCAGC	GTGGTCACCG	TGCTCTTCAG	CAGCTTGGGC	ACCCAGACCT	1740
	ACATCTGAA	CGTGAATCAC	AAGCCCAGCA	ACACCAAGGT	GGACAAGAAA	GTTGGTGAGA	1800
30	GGCCAGCACA	GGGAGGGAGG	GTGTCTGCTG	GAAGCCAGGC	TCAGCGCTCC	TGCTTGAGC	1860
	CATCCCAGCT	ATGCAGCCCC	AGTCCAGGGC	AGCAAGGCAG	GCCCCGTCTG	CCTCTTCACC	1920
	CGGAGGCCCT	TGCCCCCCCC	ACTCATGCTC	AGGGAGAGGG	TCTTCTGGCT	TTTTCCCCAG	1980
	GCTCTGGGCA	GGCACAGGCT	AGGTGCCCC	AACCCAGGCC	CTGCACACAA	AGGGCAGGT	2040
	GCTGGGCTCA	GACCTGCCAA	GAGCCATATC	CGGGAGGACC	CTGCCCCCTGA	CCTAAGCCCA	2100
35	CCCCAAAGGC	CAAACCTCTC	ACTCCCTCAG	CTCGGACACC	TTCTCTCTC	CCAGATTCCA	2160
	GTAACCTCCA	ATCTTCTCTC	TGCAGAGCCC	AAATCTTGT	ACAAAACCTCA	CACATGCCA	2220
	CCGTGCCAG	GTAAGCCAGC	CCAGGCCCTG	CCCTCCAGCT	CAAGGCGGGA	CAGGTGCCCT	2280
	AGAGTAGCCT	GCATCCAGGG	ACAGGCCCCA	GCCGGGTGCT	GACACGTCA	CCTCCATCTC	2340
	TTCCCTCAGCA	CCTGAACCTC	TGGGGGGACC	GTCAGTCTTC	CTCTTCCCCC	CAAACCCCAA	2400
40	GGACACCCCTC	ATGATCTCCC	GGACCCCTGA	GGTCACATGC	GTGGTGGTGG	ACGTGAGCCA	2460
	CGAAGACCCCT	GAGGTCAAGT	TCACTGGT	CGTGGACGCC	GTGGAGGTG	ATAATGCCA	2520
	GACAAAGCCG	CGGGAGGAGC	AGTACAACAG	CACGTACCGT	GTGGTCAGCG	TCCTCACCGT	2580
	CCTGCACCAAG	GAATGGCTGA	ATGCAAGGA	GTACAAGTGC	AAGGTCTCCA	ACAAAGCCCT	2640
	CCCAGCCCCC	ATCGAGAAAAA	CCATCTCCAA	AGCCAAAGGT	GGGACCCGTG	GGGTGCGAGG	2700
45	GCCACATGGA	CAGAGGCCGG	CTCGGCCAAC	CCTCTGCCT	GAGAGTGCACC	GCTGTACCAA	2760
	CCTCTGTCCC	TACAGGGCAG	CCCCGAGAAC	CACAGGTGTA	CACCTCTGCC	CCATCCCAGG	2820
	ATGAGCTGAC	CAAAACCAAG	GTCAGCCTGA	CCTGCCTGGT	CAAAGGCTTC	TATCCCAGCG	2880
	ACATCGCCGT	GGAGTGGGAG	AGCAATGGGC	AGCCGGAGAA	CAACTACAAG	ACCACGCCTC	2940
	CCGTGCTGGA	CTCCGACGGC	TCCCTCTTCC	TCTACAGCAA	GCTCACCGTC	GACAAGAGCA	3000
	GGTGGCAGCA	GGGGAACGTC	TTCTCATGCT	CCGTGATGCA	TGAGGCTCTG	CACAACCACT	3060
50	ACACGCAGAA	GAGCCTCTC	CTGTCTCCGG	GTAAATGAGT	GGCAGGGCCG	GCAAGCCCC	3120
	GCTCCCCGGG	CTCTCGCGGT	CGCACGAGGA	TGCTTGGCAC	GTACCCCTG	TACATACTTC	3180
	CCGGGCGCCC	AGCATGGAA	TAAAGCACCC	AGCGCTGCC	TGGGCCCTG	CGAGACTGTG	3240
	ATGGTTCTTT	CCACGGGTCA	GGCCGAGTCT	GAGGCCTGAG	TGGCATGAGG	GAGGCAGAGC	3300
	GGGTCCCAC	GGGGCAGGCC	TGGCCCCAGGC	TGTGCAGGTG	TGCTCTGGGCC	CCCTAGGGTG	3360
55	GGGCTCAGCC	AGGGGCTGCC	CTCGGCAGGG	TGGGGGATT	GCCAGCGTGG	CCCTCCCTCC	3420
	AGCAGCACCT	GCCCTGGGCT	GGGCCACGGG	AAGCCCTAGG	AGCCCTGGG	GACAGACACA	3480
	CAGCCCCCTG	CTCTGTAGGA	GACTGTCCTG	TTCTGTGAGC	GCCCCTGTCC	TCCCGACCTC	3540
	CATGCCCACT	CGGGGGCATG	CCTAGTCCAT	GTGCGTAGGG	ACAGGCCCTC	CCTCACCCAT	3600
	CTACCCCCAC	GGCACTAAC	CCTGGCTGCC	CTGCCAGCC	TCGCACCCGC	ATGGGGACAC	3660

	AACCGACTCC	GGGGACATGC	ACTCTCGGGC	CCTGTGGAGG	GACTGGTGCA	GATGCCACCA	3720
5	CACACACTCA	SCCCAGACCC	GTICAACAAA	CCCCGCACTG	AGGTTGGCCG	GCCACACGGC	3780
	CACCACACAC	ACACGTGCAC	GCCTCACACA	CGGAGCCTCA	CCCGGGCGAA	CTGCACAGCA	3840
	CCCAGACCAAG	AGCAAGGTCC	TCGCACACGT	GAACACTCCT	CGGACACAGG	CCCCCACGAG	3900
	CCCCACGCGG	CACCTCAAGG	CCCACGAGCC	TCTCGGCAGC	TTCTCCACAT	GCTGACCTGC	3960
	TCAGACAAAC	CCAGCCCCCTC	TCTCACAAAGG	GTGCCCCCTGC	AGCCGCCACA	CACACACAGG	4020
	GGATCACACA	CCACGTACG	TCCCTGGCCC	TGGCCCACTT	CCCAGTGGCG	CCCTTCCCTG	4080
	CAGGACGGAT	CAGCCTCGAC	TGTGCCCTCT	AGTTGCCAGC	CATCTGTTGT	TTGCCCTCTCC	4140
10	CCCGTGCCTT	CCTTGACCCCT	GGAAAGGTGCC	ACTCCCACGT	TCCTTCCCTA	ATAAAATGAG	4200
	GAAATTGCAT	CGCATTGTCT	GAGTAGGTGT	CATTCTATTC	TGGGGGGTGG	GGTGGGGCAG	4260
	GACAGCAAGG	GGGAGGATTG	GGAAAGACAAAT	AGCAGGCATG	CTGGGGATGC	GGTGGGCTCT	4320
	ATGGCTCTG	AGGCGGAAAC	AACCAAGCTGG	GGCTCTAGGG	GGTATCCCCA	CGCGCCCTGT	4380
	AGCGGCGCAT	TAAGCGCGC	GGGTGTGGTG	GTTACCGC	GCGTGACCCG	TACACTTGGC	4440
15	AGCGCCCTAG	CGCCCGCTCC	TTTCGCTTTC	TTCCCTTCC	TTCTCGCCAC	GTTCGCCGGG	4500
	CCTCTCAAAA	AAGGGAAAAAA	AAGCATGCAT	CTCAATTAGT	CAGCAACCAT	AGTCCCGCCC	4560
	CTAACTCCGC	CCATCCCGCC	CCTAACTCCG	CCCAGTTCG	CCCATTCTCC	GCCCCATGGC	4620
	TGACTAATT	TTTTTATTTA	TGAGAGAGGCC	GAGGCCGCT	CGGCCCTCTGA	GCTATTCCAG	4680
	AAGTAGTGAG	GAGGCTTTT	TGGAGGCC	GGCTTTGCA	AAAAGCTTGG	ACAGCTCAGG	4740
20	GCTGCCATT	CGGCCAAAC	TTGAAGGCAA	TCTCTAGCGT	AAGGCTGGTA	GGATTTATC	4800
	CCCGCTGCCA	TCATGGTCG	ACCATTA	TGCATCGT	CCGCTGCCC	AAATATGGGG	4860
	ATGGCAAGA	ACGGAGACCT	ACCCCTGGCT	CCGCTCAGGA	ACGAGTTCAA	GTACTTCAA	4920
	AGAATGACCA	CAACCTCTC	AGTGGAAAGGT	AAACAGAATC	TGGTATTAT	GGGTAGGAAA	4980
	ACTGGTTCT	CCATTCTGA	GAAGAATG	CCTTTAAAGG	ACAGAATTAA	TATAGTTCTC	5040
25	AGTAGAGAAC	TCAAAGAAC	ACCCAGAGGA	GCTCATTTC	TTGCCAAAAG	TTTGGATGAT	5100
	GCCCTTAAGAC	TTATTGAACA	ACCGGAATTG	GCAAGTAAAG	TAGACATGGT	TTGGATAGTC	5160
	GGAGGCAGTT	CTGTTTACCA	GGAGGCCATG	AAATCAACCG	GCCACCTTAG	ACTCTTTGTG	5220
	ACAAGGATCA	TGCAAGGATT	TGAAAGTGA	ACGTTTTCC	CAGAAAATTG	TTTGGGGAAA	5280
	TATAAACTTC	TCCCAGATA	CCCAGCGTC	CTCTCTGAGG	TCCAGGAGGA	AAAAGGCATC	5340
30	AAGTATAAGT	TTGAAGTCTA	CGAGAAGAAA	GACTAACAGG	AAGATGCTTT	CAAGTTCT	5400
	GCTCCCCCTCC	TAAAGCTATG	CATTTTATA	AGACCATGGG	ACTTTGCTG	GCTTTAGATC	5460
	TCTTGTGAA	GGAACCTTAC	TTCTGTGGTG	TGACATAATT	GGACAAACTA	CCTACAGAGA	5520
	TTTAAAGCTC	TAAGGTAAT	ATAAAATTTT	TAAGTGTATA	ATGTGTTAAA	CTACTGATTC	5580
	TAATTGTTG	TGTATTCTAG	ATTCCAACCT	ATGGAACTGA	TGAATGGGAG	CAGTGGTGG	5640
35	ATGCCTTAA	TGAGGAAAAC	CTGTTTGCT	CAGAAGAAT	GCCATCTAGT	GATGATGAGG	5700
	CTACTGCTGA	CTCTCAACAT	TCTACTCCTC	CAAAAAAGAA	GAGAAAGGTA	GAAGACCCCA	5760
	AGGACTTTCC	TTCAGAATTG	CTAAGTTTT	TGAGTCATG	TGTGTTAGT	AATAGAAC	5820
	TTGCTTGCTT	TGCTATTCTAC	ACCACAAAGG	AAAAAGCTG	ACTGCTATAC	AAGAAAATTA	5880
	TGAAAAATA	TTCTGTAAACC	TTTATAAGTA	GGCATAACAG	TTATAATCAT	AACATACTGT	5940
40	TTTTCTTAC	TCCACACAGG	CATAGAGTGT	CTGCTATTAA	TAACATATGCT	CAAAAATTGT	6000
	GTACCTTCTAG	CTTTTTAATT	TGTAAGGGG	TGAATAAGGA	ATATTGATG	TATAGTGCT	6060
	TGACTAGAGA	TCATAATCAG	CCATACCCACA	TTTGTAGAGG	TTTACTTGC	TTTAAAAAAC	6120
	CTCCCCACACC	TCCCCCTGAA	CCTGAAACAT	AAAATGAATG	CAATTGTTGT	TGTTAACTTG	6180
	TTTATTGCA	CTTATAATGG	TTACAAATAA	AGCAATAGCA	TCACAAATT	CACAAATAA	6240
45	GCATTTTTT	CACTGCATT	TAGTTGTGGT	TTGTCCAAAC	TCATCAATGT	ATCTTATCAT	6300
	GCTGGATCG	GCTGGATGAT	CCTCCAGCGC	GGGGATCTCA	TGCTGGAGTT	CTTCGCCAC	6360
	CCCAACTTGT	TTATTGCA	TTATAATGGT	TACAAATAAA	GCAATAGCAT	CACAAATTTC	6420
	ACAAATAAAAG	CATTTTTTC	ACTGCATTCT	AGTTGTTGTT	TGTCACAACT	CATCAATGTA	6480
	TCTTATCATG	TCTGTATACC	GTGCACCTCT	AGCTAGAGCT	TGGCGTATC	ATGGTCATAG	6540
50	CTGTTCTCTG	TGTGAAATTG	TTATCCGCTC	ACAATTCCAC	ACAAACATAGC	AGCCGGAAGC	6600
	ATAAAATGTA	AAGCCTGGGG	TGCCTAATGA	GTCAGCTAAC	TCACATTAAT	TGCGTTGCG	6660
	TCACTGCCCG	CTTTCCAGTC	GGGAAACCTG	TCGTGCCAGC	TGCATTAATG	AATCGGCCAA	6720
	CGCGCGGGGA	GAGGCGGTTT	GCGTATTGGG	CGCTCTTCCG	CTTCCCTCG	CACTGACTCG	6780
	CTGCGCTCGG	TCGTTGGCT	GCAGCGAGCG	GTATCAGCT	ACTCAAAGG	GGTAATACGG	6840
55	TTATCCACAG	AATCAGGGGA	TAACCGCAGGA	AAGAACATGT	GAGCAAAGG	CCAGCAAAG	6900
	GCCAGGAACC	GTAAAAAGGC	CGCGTTGCTG	GCGTTTTC	ATAGGCTCCG	CCCCCCTGAC	6960
	GAGCATCACA	AAAATCGACG	CTCAAGTCAG	AGGTGGCGAA	ACCCGACAGG	ACTATAAAAGA	7020
	TACCAAGCGT	TTCCCCCTGG	AAGCTCCCTC	GTGCGCTCT	CTGTTCCGAC	CCTGCCGCTT	7080
	ACCGGATACC	TGTCCGCCCTT	TCTCCCTTCG	GGAAAGCGTGG	CGCTTCTCA	ATGCTCAGC	7140
	TGTAGGTATC	TCAGTTCGGT	GTAGGTCGTT	CGCTCCAAGC	TGGGCTGTGT	GCACGAACCC	7200

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	CCCGTTCA	CCGACCGCTG	CGCCTTATCC	GGTAACTATC	GTCTTGAGTC	CAACCCGGTA	7260
	AGACACGACT	TATCGCCACT	GGCAGCAGCC	ACTGGTAACA	GGATTAGCAG	AGCGAGGTAT	7320
5	GTAGGCGGTG	CTACAGAGTT	CTTGAAGTGG	TGGCCTA	ACGGCTACAC	TAGAAGGACA	7380
	GTATTTGGTA	TCTGCGCTCT	GCTGAAGCCA	GTTACCTCG	GAAAAAGAGT	TGGTAGCTCT	7440
	TGATCCGGCA	AAACAAACCAC	CGCTGGTAGC	GGTGGTTTT	TTGTTGCAA	GCAGCAGATT	7500
	ACCGCGAGAA	AAAAGGATC	TCAAGAAGAT	CCTTTGATCT	TTTCTACGGG	GTCTGACGCT	7560
	CAGTGGAA	AAACACTACG	TTAAGGGATT	TTGGTCATGA	GATTATCAA	AAGGATCTTC	7620
10	ACCTAGATCC	TTTTAAATTA	AAAATGAAGT	TTTAAATCAA	TCTAAAGTAT	ATATGAGTAA	7680
	ACTTGGTCTG	ACAGTTACCA	ATGCTTAATC	AGTGAGGCAC	CTATCTCAGC	GATCTGTCTA	7740
	TTTCGTTCAT	CCATAGTTGC	CTGACTCCCC	GTCGTGTAGA	TAACTACGAT	ACGGGAGGGC	7800
	TTTACCATCTG	GCCCCAGTGC	TGCAATGATA	CCGCGAGACC	CACGCTCACC	GGCTCCAGAT	7860
	TTATCAGCAA	TAAACCAAGCC	AGCCCGAAGG	GCCGAGCGCA	GAAGTGGTCC	TGCAACTTTA	7920
	TCCGCCTCCA	TCCAGTCTAT	TAATTGTTGC	CGGGAAAGCTA	GAGTAAGTAG	TTCGCCAGTT	7980
15	AAATAGTTGC	GCAACGTTGT	TGCAATTGCT	ACAGGCATCG	TGGTGTACAGC	CTCGTCGTTT	8040
	GGTATGGCTT	CATTCA	CGGTTCCAA	CGATCAAGGC	GAGTACATG	ATCCCCCATG	8100
	TTGTGCAAAA	AAGCGGTTAG	CTCTTCGCT	CCTCCGATCG	TTGTCAAG	TAAGTTGGCC	8160
	GCAGTGTAT	CACTCATGGT	TATGGCAGCA	CTGCATAATT	CTCTTACTGT	CATGCCATCC	8220
	GTAAGATGCT	TTTCTGTGAC	TGGTGA	TCAACCCAAGT	CATTCTGAGA	ATAGTGTATG	8280
20	CGCGGACCGA	GTTGCTCTTG	CCCCGGCTCA	ATACGGGATA	ATACCGGCC	ACATAGCAGA	8340
	ACTTTAAAAG	TGCTCATCAT	TGGAAAACGT	TCTCGGGGC	GAAAACCTCT	AAGGATCTTA	8400
	CCGCTGTTGA	GATCCAGTTC	GATGTAACCC	ACTCGTGAC	CCAACGTAC	TTCAGCCTCT	8460
	TTTACTTTCA	CCAGCGTTTC	TGGGTGAGCA	AAAACAGGAA	GGCAAAATGC	CGCAAAAAG	8520
	GGAAATAAGGG	CGACACGGAA	ATGTTGAATA	CTCATACTCT	TCCTTTTCA	ATATTATTGA	8580
25	AGCATTTATC	AGGGTTATTG	TCTCATGAGC	GGATACATAT	TTGAATGTAT	TTAGAAAAT	8640
	AAACAAATAG	GGGTTCCCGC	CACATTCCC	CGAAAAGTGC	CACCTGACGT	C	8691

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 8327 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

40	GACGGATCGG	GAGATCTGCT	AGGTGACCTG	AGGCGCGCCG	GCTTCGAATA	GCCAGAGTAA	60
	CCTTTTTTTT	TAATTTTATT	TTATTTATT	TTTGAGATGG	AGTTTGGCGC	CGATCTCCG	120
	ATCCCTCTATG	GTGCACTCTC	AGTACAATCT	GCTCTGATGC	CGCATAGTTA	AGCCAGTATC	180
	TGCTCCCTGC	TTGTGTGTTG	GAGGTGCGCTG	AGTAGTGC	GAGCAAAATT	TAAGCTACAA	240
	CAAGGCAAGG	CTTGACCGAC	AATTGCA	AGAATCTGCT	TAGGGTTAGG	CGTTTGGCGC	300
45	TGCTTCGCGA	TGTACGGGCC	AGATATAACGC	GTTGACATG	ATTATTGACT	AGTTATTAAAT	360
	AGTAATCAAT	TACGGGGTCA	TTAGTTCAT	GCCCCATAT	GGAGTTCCGC	GTTACATAAC	420
	TTACGGTAAA	TGGCCCGCCT	GGCTGACCGC	CCAACGACCC	CCGGCCATTG	ACGTCAATAA	480
	TGACGTATGT	TCCCATAGTA	ACGCCAATAG	GGACTTTCA	TTGAAGTCAA	TGGGTGGACT	540
	ATTTACGGTA	AACTGCCAC	TTGGCA	GACTAC	ATCAAGTGT	TCATATGCCA	600
50	CTATTGACGT	CAATGACGGT	AAATGGCCCG	CCTGGCATTA	TGCCCAGTAC	ATGACCTTAT	660
	GGGACTTTCC	TACTTGGCAG	TACATCTACG	TATTAGTCAT	CGCTATTAC	ATGGTGATGC	720
	GGTTTTGGCA	GTACATCAAT	GGCGGTGGAT	AGCGGTTGA	CTCACGGGGA	TTTCCAAGTC	780
	TCCACCCCAT	TGACGTCAAT	GGGAGTTGT	TTTGGCACC	AAATCAACGG	GACTTTCCAA	840
	AATGTCGTA	CAACTCCGCC	CCATTGACGC	AAATGGCCG	TAGGGCTGTA	CGGGGGGAGG	900
55	TCTATATAAG	CAGAGCTCTC	TGGCTAACTA	GAGAACCCAC	TGCTTACTGT	CTTATCGAAA	960
	TTAATACGAC	TCACTATAGG	GAGACCCAAG	CTTGGTACCA	ATTTAAATTG	ATATCTCCTT	1020
	AGGTCTCGAG	TCTCTAGATA	ACCGGTCAAT	CGATTGGAAT	TCTTGGCGCC	GCTTGCTAGC	1080
	CACCATGGAG	TTGTGGTTAA	GCTTGGTCCCT	TCCTTGTCT	TGTTTAAAAA	GGTGTCCAGT	1140
	GTGAAGTGAA	TCTGGTGGAG	TCTGGGGGAG	GCTTAGTGC	GCCTGGAGGG	TCCCTGAAAG	1200
	TCTCCTGTGT	AACCTCTGGA	TTCACTTTCA	GTGACTATTA	CATGTATTG	GTTCGCCAGA	1260

	CTCCAGAGAA	GAGGCTGGAG	TGGGTCGCAT	ACATTAGTCA	AGGTGGTGAT	ATAACCGACT	1320
	ATCCAGACAC	TGTAAAGGGT	CGATTCACCA	TCTCCAGAGA	CAATGCCAAG	AACACCCCTGT	1380
5	ACCTGAAAT	GAGCCGCTCG	AAAGTCTGAGG	ACACAGCCAT	GTATTACTGT	GCAAGAGGCC	1440
	TGGACGACGG	GGCCCTGGTT	GCTTACTGGG	GCCAAGGGAC	TCTGGTCACG	GTCTCTGTAG	1500
	CTAGCACCAA	GGGCCCATCG	GTCTTCCCCC	TGGCACCCCTC	CTCCAAGAGC	ACCTCTGGGG	1560
	GCACAGCGGC	CCTGGGCTGC	CTGGTCAAGG	ACTACTTCCC	CGAACCGGTG	ACGGTGTGCGT	1620
	GGAACTCAGG	CGCCCTGACC	AGCGGCGTGC	ACACCTTCCC	GGCTGTCCCTA	CAGTCCTCAG	1680
10	GACTCTACTC	CCTCAGCAGC	GTGGTCACCG	TGCCCTCCAG	CAGCTTGGGC	ACCCAGACCT	1740
	ACATCTGAA	CGTGAATCAC	AAGCCCAGCA	ACACCAAGGT	GGACAAGAAA	GTTGGTGAGA	1800
	GGCCAGCACA	GGGAGGGAGG	GTGCTGCTG	GAAGCCAGGC	TCAGCGCTCC	TGCCTGGACG	1860
	CATCCCAGGCT	ATGCAGCCCC	AGTCCAGGGC	AGCAAGGCAG	GCCCCGTCTG	CCTCTTCACC	1920
	CGGAGGCCTC	TGCCCGCCOCC	ACTCATGCTC	AGGGAGAGGG	TCTTCTGGCT	TTTTCCCCAG	1980
15	GCTCTGGGCA	GGCACAGGGT	AGGTGCCCCCT	AACCCAGGCC	CTGCACACAA	AGGGGCAGGT	2040
	GCTGGGCTCA	GACCTGCCAA	GAGCCATATC	CGGGAGGACC	CTGCCCTGTG	CCTAAGGCCA	2100
	CCCCAAAGGC	CAAACCTCTCC	ACTCCCTCAG	CTCGGACACC	TTCTCTCCCTC	CCAGATTCCA	2160
	GTAACCTCCA	ATCTTCTCTC	TGCAAGAGCCC	AAATCTGTG	ACAAAACCTCA	CACATGCCA	2220
	CCGTGCCCCAG	GTAAGCCAGC	CCAGGCCCTCG	CCCTCCAGCT	CAAGGCAGGA	CAGGTGCCCT	2280
20	AGAGTAGCCT	GCATCCAGGG	ACACCAACAG	TGGGTACCAA	CATGTCCGGA	GCCACATGGA	2340
	CAGAGGGCCG	CTCGGCCAAC	CCCTCTGCCCT	GAGAGTGAAC	GCTGTACCAA	CCTCTGTCCC	2400
	TACAGGGCAG	CCCCGAGAAC	CAAGGTGTA	CACCCCTGGCC	CCATCCCAGGG	ATGAGCTGAC	2460
	CAAGAACACAG	GTCAGCCTGA	CCTCCCTGGT	CAAAGGCTTC	TATCCCAGCG	ACATCGCCG	2520
	GGAGTGGGAG	AGCAATGGGC	AGCCGGAGAA	CAACTACAAG	ACACGCCCTC	CCGTGCTGGA	2580
25	CTCCGACGGC	TCCTTCTTCC	TCTACAGCAA	GCTCACCGTG	GACAAGAGCA	GGTGGCAGCA	2640
	GGGGAACGTC	TTCTCATGCT	CCGTGATGCA	TGAGGCTCTG	CACAAACACT	ACACGCAGAA	2700
	GAGCCTCTCC	CTGTCTCCGG	GTAAATGAGT	GCGACGGCCG	GCAAGCCCCC	GCTCCCCGGG	2760
	CTCTCGCGGT	CGCACGAGGA	TGCTTGGGAC	GTACCCCCCTG	TACATACTTC	CCGGGCGCCC	2820
	AGCATGGAAA	TAAAGCACCC	AGGCGTGU	TGGGCCCCCTG	CGAGACTGTG	ATGGTTCTTT	2880
	CCACGGGTCA	GGCGAGTCT	GAGGCCCTGAG	TGGCATGAGG	GAGGCAGAGC	GGGTCCCCACT	2940
30	GTCCCCACAC	TGGCCCAGGC	TGTGCAGGTG	TGCCCTGGCC	CCCTAGGGTG	GGGCTCAGCC	3000
	AGGGGCTGCC	CTCGGCAGGG	TGGGGGATT	GCCAGCGTGG	CCCTCCCTCC	AGCAGCACCT	3060
	GCCCTGGGCT	GGGCCACGGG	AAGCCCTAGG	AGCCCCCTGGG	GACAGACACA	CAGCCCCCTGC	3120
	CTCTGTAGGA	GAETGTCTG	TTCTGTGAGC	GCCCCCTGTCC	TCCCCGACCTC	CATGCCCACT	3180
	CGGGGGCATG	CCTAGTCCAT	GTGCGTAGGG	ACAGGCCCTC	CCTCACCCAT	CTACCCCCAC	3240
35	GGCACTAAC	CCTGGCTGCC	CTGCCAGGCC	TCGCACCCGC	ATGGGGACAC	AACCGACTCC	3300
	GGGGACATGC	ACTCTCGGGC	CCTGTGGAGG	GACTGGTCA	GATGCCACAA	CACACACTCA	3360
	GCCCAGACCC	GTTCAACAAA	CCCCGCCTG	AGGTTGGCCG	GCCACACGGC	CACCAACAC	3420
	ACACGTGCAC	GCCTCACACA	CGGAGCCTCA	CCCGGGCGAA	CTGCACAGCA	CCCAGACCAG	3480
	AGCAAGGTCC	TCGCACACGT	GAACACTCTC	CGGACACAGG	CCCCCACGAG	CCCCACGCCG	3540
40	CACCTCAAGG	CCCACGAGCC	TCTCGGCAGC	TTCTCCACAT	GCTGACCTGC	TCAGACAAAC	3600
	CCAGCCCTCC	TCTCACAAGG	GTGCCCTCTG	AGCCGCCACA	CACACACAGG	GGATCACACA	3660
	CCACGTCACCG	TCCCTGGCCC	TGGCCCACTT	CCCACTGGCG	CCCTCCCTCTG	CAGGACGGAT	3720
	CAGCCTCGAC	TGTGCTTCT	AGTTGCCAGC	CATCTGTG	TTGCCCTCTCC	CCCGTGCCTT	3780
	CCTTGAACCT	GGAAGGTGCC	ACTCCCACTG	TCCTTCTCTA	ATAAAATGAG	GAAATTGCT	3840
45	CGCATTGCT	GAGTAGGTGT	CATTCTATTC	TGGGGGGTGG	GGTGGGGCAG	GACAGCAAGG	3900
	GGGAGGATTG	GGAAGACAT	AGCAGGCATG	CTGGGGATGC	GGTGGGCTCT	ATGGCTTCTG	3960
	AGGCGGAAAG	AACCAGCTGG	GGCTCTAGGG	GGTATCCCCA	CGGCCCTGT	AGCAGGCCAT	4020
	TAAGCGCGC	GGGTGTGGTG	GTTACCGC	CGCTGACCGC	TACACTTGCC	AGCGCCCTAG	4080
	CGCCCGCTCC	TTTCGCTTTC	TTCCCTTCCT	TTCTCGCCAC	GTTGCCGGG	CCTCTCAAAA	4140
50	AAGGGAAAAAA	AAGCATGCAT	CTCAATTAGT	CAGCAACCAT	AGTCCGCC	CTAACTCCGC	4200
	CCATCCCGCC	CCTAACTCCG	CCCAGTTCCG	CCCATTCTCC	GGCCCATGGC	TGACTAATT	4260
	TTTTTATTTA	TGCAAGAGGCC	GAGGCCGCC	CGGCCTCTGA	GCTATTCCAG	AAGTAGTGAG	4320
	GAGGCTTTTT	TGGAGGCC	GGCTTTTGCA	AAAAGCTGG	ACAGCTAGG	GCTGCGATT	4380
	CGCGCCAAAC	TTGACGGCAA	TCCTAGCGTG	AAGGCTGGT	GGATTTATC	CCCGCTGCCA	4440
55	TCATGGTTCG	ACCATTGAAC	TGCATCGTCG	CCGTGTCCA	AAATATGGGG	ATTGGCAAGA	4500
	ACGGAGACCT	ACCCCTGGCCT	CCGCTCAGGA	ACGAGTCAA	GTACTTCCAA	AGAATGACCA	4560
	CAACCTCTTC	AGTGGAAAGGT	AAACAGAAC	TGGTGATTAT	GGGTAGGAAA	ACCTGGTCT	4620
	CCATTCCCTGA	GAAGAATCGA	CCTTAAAGG	ACAGAATTAA	TATAGTTCTC	AGTAGAGAAC	4680
	TCAAAGAAC	ACCACGAGGA	GCTCATTTTC	TTGCCAAAG	TTTGGATGAT	GCCTTAAGAC	4740
	TTATTGAACA	ACCGGAATTG	GCAAGTAAAG	TAGACATGGT	TTGGATAGTC	GGAGGCAGTT	4800

5	CTGTTTACCA	GGAAGCCATG	AATCAACCA	GCCACCTTAG	ACTCTTTGTG	ACAAGGATCA	4860
	TGCAGGAATT	TGAAAGTGAC	ACGTTTTCC	CAGAAATTGA	TTTGGGGAAA	TATAAACCTTC	4920
	TCCCGAATA	CCCAGGCCTC	CTCTCTGAGG	TCCAGGAGGA	AAAAGGCATC	AAGTATAAGT	4980
	TTGAAGCTA	CGAGAAGAAA	GACTAACAGG	AAGATGCTT	CAAGTTCTCT	GCTCCCCCTCC	5040
	TAAAGCTATG	CATTTTATA	AGACCATGGG	ACTTTGCTG	GCTTAGATC	TCTTTGTGAA	5100
	GGAACCTTAC	TTCTGTGGTG	TGACATAATT	GGACAAACTA	CCTACAGAGA	TTTAAAGCTC	5160
	TAAGGTAAAT	ATAAAATTTT	TAAGTGTATA	ATGTGTTAA	CTACTGATTC	TAATTGTTG	5220
	TGTATTTAG	ATTCCAACCT	ATGGAACGT	TGAATGGGAG	CAGTGGTGG	ATGCCTTAA	5280
	TGAGGAAAAC	CTGTTTGCT	AGAGAAGAAAT	GCCATCTAGT	GATGATGAGG	CTACTGCTGA	5340
10	CTCTCAACAT	TCTACTCCTC	CAAAAAAGAA	GAGAAAGGTA	GAAGACCCCA	AGGACTTCC	5400
	TTCAGAATTG	CTAAGTTTTT	TGAGTCATGC	TGTGTTAGT	AATAGAACTC	TTGCTTGCTT	5460
	TGCTATTTAC	ACCACAAAGG	AAAAGCTGC	ACTGCTATAC	AAGAAAATTA	TGGAAAAATA	5520
	TTCTGTAACC	TTTATAAGTA	GGCATAACAG	TTATAATCAT	AACATACTGT	TTTTCTTAC	5580
	TCCACACAGG	CATAGAGTGT	CTGCTATTAA	TAACTATGCT	CAAAATTGT	GTACCTTAC	5640
	CTTTTTAATT	TGTAAAGGGG	TTAATAAGGA	ATATTGATG	TATAGTGCCT	TGACTAGAGA	5700
	TCATAATCAG	CCATACCACA	TTTGTAGAGG	TTTACTTGC	TTAAAAAAAC	CTCCCACACC	5760
	TCCCCCTGAA	CCTGAAACAT	AAAATGAATG	CAATTGTTGT	TGTTAACTTG	TTTATTGCA	5820
	CTTATAATGG	TTACAAATAA	AGCAATAGCA	TCACAAATT	CACAAATAAA	GCATTTTTT	5880
20	CACTGCATTC	TAGTTGTGGT	TTGTCCAAAC	TCATCAATGT	ATCTTATCAT	GTCTGGATCG	5940
	GCTGGATGAT	CCTCCAGCGC	GGGGATCTCA	TGCTGGAGTT	CTTCGCCAC	CCCAACTTGT	6000
	TTATTGCA	TTATAATGGT	TACAAATAAA	GCAATAGCAT	CACAAATTTC	ACAAATAAAAG	6060
	CATTTTTTTC	ACTGCATTCT	AGTTGTGGTT	TGTCCAAACT	CATCAATGTA	TCTTATCATG	6120
	TCTGTATACC	GTCGACCTCT	AGCTAGAGCT	TGGCGTAATC	ATGGTCATAG	CTGTTTCTG	6180
	TGTGAAATTG	TTATCCGCTC	ACAATTCCAC	ACAACATACG	AGCGGAAGC	ATAAAGTGT	6240
25	AAGCCTGGGG	TGCCTAATGA	GTGAGCTAAC	TGACATTAAT	TGCGTGC	TCACTGCCG	6300
	CTTCCAGTC	GGGAAACCTG	TCGTGCCAGC	TGCAATTATG	AATCGGCCAA	CGCGCGGGGA	6360
	GAGGCGGTTT	GCGTATTGGG	CGCTCTTCCG	CTTCCCTCGCT	CACTGACTCG	CTGCGCTCGG	6420
	TCGTCGCGCT	GCGCGAGCG	GTATCAGCTC	ACTCAAAGGC	GGTAATACGG	TTATCCACAG	6480
	ATACAGGGGA	TAACCGAGGA	AAAACATGT	GAGCAAAAGG	CCAGCAAAAG	GCCAGGAACC	6540
	GTAAAAAGGC	CGCGTTGCTG	CGGTTTTCC	ATAGGCTCCG	CCCCCCTGAC	GAGCATCACA	6600
	AAAATCGACG	CTCAAGTCAG	AGGTGGCGAA	ACCCGACAGG	ACTATAAAAGA	TACCAGGC	6660
30	TTCCCCCTGG	AAGCTCCCTC	GTGCGCTCTC	CTGTTCCGAC	CCTGCCGCTT	ACCGGATACC	6720
	TGTCCGCCTT	TCTCCCTTCG	GAAGCGTGG	CGCTTCTCA	ATGCTCACCG	TGTTAGTATC	6780
	TCAGTTCGGT	GTAGGTCGTT	CGCTTCAAGC	TGGGCTGTGT	GCACGAACCC	CCCCTTCAGC	6840
	CCGACCGCTG	CGCCTTATCC	GTAACTATC	GTCTTGAGTC	CAACCCGGTA	AGACACGACT	6900
	TATCGCCACT	GGCAGCAGCC	ACTGGTAACA	GGATTAGCAG	AGCGAGGTAT	GTAGGCGGTG	6960
	CTACAGAGT	CTTGAAGTGG	TGGCCTAACT	ACGGCTACAC	TAGAAGGACA	GTATTTGGTA	7020
	TCTGCGCT	GCTGAAGCA	TTTACCTTC	GAAAAAGAGT	TGGTAGCTCT	TGATCCGGCA	7080
	AACAAACAC	CGCTGGTAGC	GGTGGTTTT	TTGTTGCA	GCAGCAGATT	ACCGCGAGAA	7140
40	AAAAAGGATC	TCAAGAAGAT	CCTTTGATCT	TTTCTACGGG	GTCTGAGCT	CAGTGGAACG	7200
	AAAACCTACG	TTAAGGGATT	TTGGTCATGA	GATTATCAAA	AAGGATCTTC	ACCTAGATCC	7260
	TTTTAAATTA	AAAATGAAGT	TTTAAATCAA	TCTAAAGTAT	ATATGAGTAA	ACTTGGCTG	7320
	ACAGTTACCA	ATGCTTAATC	AGTGAGGCAC	CTATCTCAGC	GATCTGTCTA	TTTCGTTCAT	7380
	CCATAGTTGC	CTGACTCCCC	GTCGTGAGA	TAACTACGAT	ACGGGAGGGC	TTACCATCTG	7440
	CCCCCAGTGC	TGCAATGATA	CCGCGAGAC	CACGCTCACC	GGCTCCAGAT	TTATCAGCAA	7500
	TAAACCGAGC	AGCCGGAAGG	GCCGAGCGCA	GAAGTGGTCC	TGCAACTTAA	TCCGCCCTCA	7560
	TCCAGTCTAT	TAATTGTTGC	CGGGAAAGCTA	GAGTAAGTAG	TTCGCCAGTT	AATAGTTGC	7620
	GCAACGGTGT	TGCCATTGCT	ACAGGCATCG	TGGTGTCA	CTCGTCGTTT	GGTATGGCTT	7680
	CATTCA	CGGTTCCCAA	CGATCAAGGC	GAGTTACATG	ATCCCCCATG	TTGTGCAAAA	7740
50	AAGCGGTTAG	CTCCTCGGT	CCTCCGATCG	TTGTCAGAAG	TAAGTGGCC	GCAGTGTAT	7800
	CACTCATGGT	TATGGCAGCA	CTGCATAATT	CTCTTACTGT	CATGCCATCC	GTAAGATGCT	7860
	TTTCTGTGAC	TGGTGTAGTC	TCAACCAAGT	CATTCTGAGA	ATAGTGTATG	CGGGCACCAG	7920
	GTTGCTCTTG	CCCGGGCGTCA	ATACGGGATA	ATACCGGCC	ACATAGCAGA	ACTTTAAAG	7980
	TGCTCATCAT	TGGAAAACGT	TCTTCGGGGC	GAAAACCTCT	AAGGATCTTA	CCGCTGTTGA	8040
	GATCCAGTTC	GATGTAACCC	ACTCGTGCAC	CCAACTGATC	TTCAGCATCT	TTTACTTCA	8100
	CCAGCGTTTC	TGGGTGAGCA	AAAACAGGAA	GGCAAAATGC	CGCAAAAAAG	GGAATAAGGG	8160
	CGACACGGAA	ATGTTGAATA	CTCATACTCT	TCCTTTTCA	ATATTATTGA	AGCATTATTC	8220
	AGGGTTATTG	TCTCATGAGC	GGATACATAT	TTGAATGTAT	TTAGAAAAAT	AAACAAATAG	8280
55	GGGTTCCGCG	CACATTCCC	CGAAAAGTGC	CACCTGACGT	CCBRAAG		8327

(2) INFORMATION FOR SEQ ID NO:11:

5 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 8897 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

15	GGTACCAATT TAAATTGATA TCTCCTTAGG TCTCGAGCAC CATGAAGTTG CCTGTTAGGC	60
	TGTTGGTGCT GATGTTCTGG ATTCTTGCTT CCAGCAGTGA TGTTTTGATG ACCCAAATTC	120
	CAGTCTCCCT GCCTGTCAGT CTTGGAGATC AAGCGTCAT CTCTTGAGA TCTAGTCAGA	180
	TCATTGTACA TAATAATGGC AACACCTATT TAGAATGGTA CCTGCAGAAA CCAGGCCAGT	240
20	CTCCACAGCT CCTGATCTAC AAAGTTTCA ACCGATTTC TGGGGTCCC GACAGGTTCA	300
	GGGGCAGTGG ATCAGGGACA GATTCACAC TCAAGATCAG CAGAGTGGAG GCTGAGGATC	360
	TGGGAGTTA TTACTGCTT CARGGTTCAC ATGTTCCATT CACGTTCCGC TCAGGGACAA	420
	AGTTGGAAAT AAAACGTAAG TCTCGAGTCT CTAGATAACC GGTCATCGA TTGGAATTCT	480
	AAACTCTGAG GGGGTGGAT GACGTGGCA TTCTTGCCT AAAGCATTGA GTTTACTGCA	540
	AGGTCAGAAA AGCATGCAA GCCCTCAGAA TGGCTGCAA GAGCTCCAAC AAAACAATT	600
25	AGAACTTTAT TAAGGAATAG GGGGAAGCTA GGAAGAACT CAAACACATCA AGATTTAAA	660
	TACGCTTCTT GGTCTCCTG CTATAAATAT CTGGGATAAG CATGCTGTTT TCTGTCTGTC	720
	CCTAACATGC CCTTATCCGC AAACAAATCA CCCAAGGGCA GAACTTTGTT ACTTAAACAC	780
	CATCCTGTTT GCTTCTTCC TCAGGAACTG TGGCTGCACC ATCTGTCTTC ATCTTCCCGC	840
	CATCTGATGA GCAGTTGAAA TCTGGAACIG CCTCTGTTGT GTGCCTGCTG AATAACTTCT	900
30	ATCCCCAGAGA GGCCAAAGTA CAGTGGAAAG TGGATAACGC CCTCCAATCG GGTAACTCCC	960
	AGGAGAGTGT CACAGAGCAG GAGAGCAAGG ACAGCACCA CAGCCTCAGC AGCACCCCTGA	1020
	CGCTGAGCAA AGCAGACTAC GAGAAACACA AAGTCTACGC CTGCGAAGTC ACCCATCAGG	1080
	GCCTGAGCTC GCCCGTCACA AAGAGCTTCA ACAGGGGAGA GTGTTAGAGG GAGAAGTGCC	1140
	CCCACCTGCT CCTCAGTTCC AGCCTGACCC CCTCCCATCC TTTGGCCTCT GACCCTTTT	1200
	CCACAGGGGA CCTACCCCTA TTGCGGTCTT CCAGCTCATC TTTCACCTCA CCCCCCTCCT	1260
35	CCTCCTTGGC TTTAATTATG CTAATGTTGG AGGAGAATGA ATAAATAAAG TGAATCTTG	1320
	CACCTGTGGT TTCTCTCTT CCTCATTTAA TAATTATTAT CTGTTGTTTT ACCAACTACT	1380
	CAATTCTCT TATAAGGGAC TAAATATGTA GTCATCTAA GGCACTAAC CATTATAAA	1440
	AATCATCCTT CATTCTATT TACCCCTATCA TCCTCTGCAA GACAGTCCTC CCTCAAACCC	1500
	ACAAGCCTTC TGTCCTACA GTCCCCCTGGG CCATGGTAGG AGAGACTTGC TTCCTGTTT	1560
40	TCCCCTCCCT AGCAAGCCCT CATAGTCCTT TTAAAGGGTG ACAGGTCTTA CAGTCATATA	1620
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	TATAAAGAGA ATCATTCTATT GCAACATGAT ATAAAATAC AACACAATAA AAGCAATTAA	1740
	ATAAAACAAAC AATAGGGAAA TGTTTAAGTT CATCATGGTA CTTAGACTTA ATGGAATGTC	1800
	ATGCCCTATT TACATTTTA AACAGGTACT GAGGGACTCC TGTCTGCCAA GGGCCGTATT	1860
45	GAGTACTTTG CACAACCTAA TTTAATCCAC ACTATACTGT GAGATTAAAA ACATTCTTAA	1920
	AAATGTTGCA AAGGTTCTAT AAAGCTGAGA GACAAATATA TTCTATAACT CAGCAATCCC	1980
	ACTTCTAGAT GACTGAGTGT CCCCACCCAC CAAAAAAACTA TGCAAGAATG TTCAAAGCAG	2040
	CTTTATTTAC AAAAGCCAAA AATGGAAAT AGCCCGATTG TCAACAAATA GAATGAGTTA	2100
	TTAAACTGTTG GTATGTTTAT ACATTAGAAT ACCCAATGAG GAGATTAAAC AAGCTACAAAC	2160
50	TATACCTACT CACACAGATG AATCTCATAA AAATAATGTT ACATAAGAGA AACTCAATGC	2220
	AAAAGATATG TTCTGTATGT TTTCATCCAT ATAAAGTCA AAACCAAGGT AAAATAAAGT	2280
	TAGAAATTG GATGGAAATT ACTCTTAGCT GGGGGTGGGC GAGTTAGTGC CTGGGAGAAG	2340
	ACAAAGAAGGG GCTTCTGGGG TCTTGGTAAT GTTCTGTTCC TCGTGTGGGG TTGTGCAGTT	2400
	ATGATCTGTC CACTGTTCTG TATACACATT ATGCTTCAA ATAACCTCAC ATAAAGAACAA	2460
55	TCTTATACCC AGTTAATAGA TAGAAGAGGA ATAAGTAATA GGTCAAGACC AACGCAGCTG	2520
	GTAAGTGGGG GCCTGGGATC AAATAGCTAC CTGCTTAATC CTGCCWCCT GAGCCCTGAA	2580
	TGAGTCTGCC TTCCAGGGCT CAAGGTGCTC AACAAACAA CAGGCCGTCT ATTTCTGG	2640
	CATCTGTGCC CTGTTGGCT AGCTAGGAGC ACACATACAT AGAAATTAAA TGAAACAGAC	2700
	CTTCAGCAAG GGGACAGAGG ACAGAATTAA CCTTGCCCCAG ACACTGGAAA CCCATGTATG	2760

	AACACTCACA	TGTTTGGAA	GGGGGAAGGG	CACATGAAA	TGAGGACTCT	TCCTCATTCT	2820
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	ACCTCTCTCT	GCCTACACTC	TGAAGGGGTT	CAGGAGTAAC	TAACACAGCA	TCCCTTCCCT	2940
5	CAAATGACTG	ACAATCCCTT	TGTCTGCTT	TGTTTTCTT	TCCAGTCAGT	ACTGGGAAAG	3000
	TGGGGAAGGA	CAGTCATGGA	GAAGACTACAT	AAGGAAGCAC	CTTGCCTTC	TGCCTCTTGA	3060
	GAATGTTGAT	GAGTATCAAAC	TCTTCAAAC	TTTGGAGGT	TGAGTAGGGG	TGAGACTCAG	3120
	TAATGTCCT	TCCAATGACA	TGAACCTGCT	CACTCATCCC	TGGGGGCCAA	ATTGAACAAT	3180
	CAAAGGCAGG	CATAATCCAG	TTATGAATTTC	TTGCGGCCGC	TTGCTAGCTT	CACGTGTTGG	3240
10	ATCCAACCGC	GGAAGGGCCC	TATTCATAG	TGTCACCTAA	ATGCTAGAGC	TCGCTGATCA	3300
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	GAGGATTGGG	AAGACAATAG	CAGGCATGCT	GGGGATGCGG	TGGGCTCTAT	GGCTTCTGAG	3540
15	GCGGAAAGAA	CCAGCTGGGG	CTCTAGGGGG	TATCCCCACG	CGCCCTGTAG	CGGCGCATTA	3600
	AGCGCGGCCG	GTGTTGGGT	TAGGCCAGC	GTGACCGCTA	CACTGCCAG	CGCCCTAGCG	3660
	CCCGCTCTT	TCGCTTCTT	CCCTTCTT	CTCGCCACGT	TCGCCGGGCC	TCTCAAAAAAA	3720
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	ATCCCCCCCC	TAACTCCGCC	CAGTCCGCC	CATTCTCCGC	CCCATGGCTG	ACTAATTTTT	3840
20	TTTATTATG	CAGAGGCCGA	GGCCGCCCTG	GCCTCTGAGC	TATTCCAGAA	GTAGTGAGGA	3900
	GGCTTTTTG	GAGGCCTAGG	CTTTGCAAA	AAGCTGGAC	AGCTCAGGGC	TGCGATTTCG	3960
	CGCCAAACCT	GACGGCAATC	CTAGCGTGAA	GGCTGGTAGG	ATTTTATCCC	CGCTGCCATC	4020
	ATGGTTCGAC	CATTGAACTG	CATCGTCGCC	GTGTCCCCAA	ATATGGGGAT	TGGCAAGAAC	4080
	GGAGACCTAC	CCTGGCCTCC	GCTCAGGAAC	GAGTTCAAGT	ACTTCCAAAG	AATGACCACA	4140
25	ACCTCTTCAG	TGGAAGGTAA	ACAGAATCTG	GTGATTATGG	GTAGGAAAAC	CTGGTTCTCC	4200
	ATTCCTGAGA	AGAATCGACC	TTTAAAGGAC	AGAATTATA	TAGTTCTCAG	TAGAGAACTC	4260
	AAAGAACCCAC	CACGAGGAGC	TCATTTCTT	GGAAAAGTT	TGGATGATGC	CTTAAGACTT	4320
	ATTGAACAAAC	CGGAATTGGC	AAAGTAAAGTA	GAATGGTT	GGATAGTCGG	AGGCAGTTCT	4380
	GTTTACCAAGG	AAGCCATGAA	TCAACCAGGC	CACCTTAGAC	TCTTGTGAC	AAGGATCATG	4440
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	CCAGAATACC	CAGGCGCTCT	CTCTGAGGTC	CAGGAGGAAA	AAGGCATCAA	GTATAAGTTT	4560
	GAAGTCTAGC	AGAAGAAAAGA	CTAACAGGAA	GATGCTTCA	AGTTCTCTGC	TCCCCCTCCTA	4620
	AAGCTATGCA	TTTTTATAAG	ACCATGGGAC	TTTGCTGGC	TTTAGATCTC	TTTGTGAAGG	4680
	AACCTTACTT	CTGTGGTGTG	ACATAATTGG	ACAAACTACC	TACAGAGATT	TAAAGCTCTA	4740
35	AGTAAATAT	AAAATTTTA	AGTGTATAAT	GTGTTAACT	ACTGATTCTA	ATTGTTTGTG	4800
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40	CTATTACAC	CACAAAGGAA	AAAGCTGCAC	TGCTATACAA	GAAAATTATG	GAAAATATT	5100
	CTGTAACCTT	TATAAGTAGG	CATAACAGTT	ATAATCATAA	CATACTGTT	TTTCTTACTC	5160
	CACACAGGCA	TAGAGTGTCT	GCTATTAAAT	ACTATGCTCA	AAAATTGTGT	ACCTTTAGCT	5220
	TTTTAATTG	TAAAGGGGTT	AATAAGGAAT	ATTTGATGTA	TAGTGCCTTG	ACTAGAGATC	5280
	ATAATCAGCC	ATACCACATT	TGTAGAGGTT	TTACTGCTT	AAAAAAACCT	CCCACACCTC	5340
	CCCCCTGAACC	TGAAACATAA	AATGAATGCA	ATTGTTGTTG	TTAACATTGTT	TATTGCAGCT	5400
45	TATAATGGTT	ACAAATAAAG	CAATAGCATC	ACAAATTTC	CAAATAAAAGC	ATTTTTTCA	5460
	CTGCATTCTA	GTTGTGGTT	GTCCAAACTC	ATCAATGTAT	CTTATCATGT	CTGGATCGGC	5520
	TGGATGATCC	TCCAGCGCGG	GGATCTCATG	CTGGAGTTCT	TCGCCCCACCC	CAACTGTTT	5580
	ATTCAGCTT	ATAATGGTTA	CAATAAAAGC	AATAGCATCA	CAAATTTCAC	AAATAAAGCA	5640
	TTTTTTTCAC	TGCAATTCTAG	TTGTGGTTG	TCCAAACTCA	TCAATGTATC	TTATCATGTC	5700
50	TGTATACCGT	CGACCTCTAG	CTAGAGCTG	GCGTAATCAT	GGTCATAGCT	TTTCTCTGTG	5760
	TGAAATTGTT	ATCCGCTCAC	AATTCCACAC	AAACATACGAG	CGGAAAGCAT	AAAGTGTAAA	5820
	GCCTGGGGTG	CCTAATGAGT	GAGCTAACTC	ACATTAATTG	CGTTCGCGCTC	ACTGCCCGCT	5880
	TTCCAGTCGG	GAAACCTGTC	GTGCCAGCTG	CATTAATGAA	TCGGCCAACG	CGGGGGGAGA	5940
	GGCGGGTTTG	GTATTGGCG	CTCTTCCGCT	TCCTCGCTCA	CTGACTCGCT	CGCGTCGGTC	6000
55	GTTCGGCTGC	GGCGAGCGGT	ATCAGCTCAC	TCAAAGGGCG	TAATACGGTT	ATCCACAGAA	6060
	TCAGGGGATA	ACGCAGGAAA	GAACATGTGA	GAAAAGGCC	AGCAAAAGGC	CAGGAACCGT	6120
	AAAAAGGCCG	CGTTGCTGGC	GTTTTTCCAT	AGGCTCCGCC	CCCCGTACGA	GCATCACAAA	6180
	AATCGACGCT	CAAGTCAGAG	GTGGCGAAAC	CCGACAGGAC	TATAAAGATA	CCAGGCCTTT	6240
	CCCCCTGGAA	GCTCCCTCGT	GCGCTCTCCT	GTTCCGACCC	TGCCGTTAC	CGGATAACCTG	6300

	TCCGGCTTTC	TCCCTTCGGG	AAGCGTGGCG	CTTTCTCAAT	GCTCACGCTG	TAGGTATCTC	6360
	AGTCGGTGT	ACGTCGTTCG	CTCCAAGCTG	GGCTGTGTGC	ACGAACCCCC	CGTTCAGCCC	6420
5	GACCGCTGCC	CCTATATCCGG	TAACATATCGT	CTTGAGTCCA	ACCCGGTAAG	ACACGACTTA	6480
	TCGCCACTGG	CAGCAGCCAC	TGGTAACAGG	ATTAGCAGAG	CGAGGTATGT	AGGCGGTGCT	6540
	ACAGAGTTCT	TGAAGTGGTG	GCCTAACTAC	GGCTACACTA	GAAGGACAGT	ATTTGGTATC	6600
	TGCGCTCTGC	TGAAGCAGT	TACCTCGGA	AAAAGAGTTG	GTAGCTCTTG	ATCCGGCAA	6660
	CAAACCACCG	CTGGTAGCGG	TGGTTTTTTT	GTTCGCAAGC	AGCAGATTAC	GCGCAGAAAA	6720
10	AAAGGATCTC	AAGAAGATCC	TTTGATCTTT	TCTACGGGGT	CTGACGCTCA	GTGGAACGAA	6780
	AACTCACGTT	AAGGGATTTT	GGTCATGAGA	TTATCAAAAA	GGATCTTCAC	CTAGATCCTT	6840
	TTAAATTAAA	AATGAAGTTT	AAATCAATC	AAAGTATAT	ATGAGTAAAC	TTGGTCTGAC	6900
	AGTTACCAAT	GCTTAATCAG	TGAGGCACCT	ATCTCAGCGA	TCTGTCATT	TCGTTCATCC	6960
	ATAGTTGCCT	GACTCCCCGT	CGTGTAGATA	ACTACGATAC	GGGAGGGCTT	ACCATCTGGC	7020
15	CCCAGTGTG	CAATGATACC	GCAGAGACCA	CGCTCACCGG	CTCCAGATTT	ATCAGCAATA	7080
	AACCAGCCAG	CCGGAAGGGC	CGAGCGCAGA	AGTGGTCTCG	CAACTTTATC	CGCCTCCATC	7140
	CAGTCTATTA	ATTGTTGCCG	GGAAAGCTAGA	GTAAGTAGT	CGCCAGTTAA	TAGTTTGGCC	7200
	AACGTTGTTG	CCATTGTCAC	AGGCATCGTG	GTGTCACGCT	CGTCGTTTG	TATGGCTTCA	7260
	TTCAAGCTCG	GTTCCTAACG	ATCAAGGCGA	GTTACATGAT	CCCCCATGTT	GTGCAAAAAA	7320
	GCGGTTAGCT	CCTTCGGTCC	TCCGATCGTT	GTCAGAAGTA	AGTGGGCCG	AGTGTATCA	7380
20	CTCATGGTTA	TGGCAGCACT	GCATAATTCT	CTTACTGTCA	TGCCCATCCG	AAGATGCTT	7440
	TCTGTGACTG	GTGAGTACTC	AAACCAAGCTA	TTCTGAGAAT	AGTGTATGCG	GCGACCGAGT	7500
	TGCTCTTGCC	CGGCGTCAAT	ACGGGATAAT	ACCGCGCCAC	ATAGCAGAAC	TTTAAAAGTG	7560
	CTCATCATTG	GAAAACGTTT	TTCGGGGCCG	AAACTCTAA	GGATCTTACC	GCTGTTGAGA	7620
	TCCAGTTCGA	TGTAACCCAC	TCGTGCACCC	AACTGATCTT	CAGCATCTT	TACTTCACC	7680
25	AGCGTTCTG	GGTGAGCAAA	AAACAGGAAGG	AAAATGCCG	AAAAAAAGGG	AATAAGGGCG	7740
	ACACGGAAAT	GTTGAATACT	CATACTCTTC	CTTTTTCAAT	ATTATTGAAG	CATTTATCAG	7800
	GGTTATTGTC	TCATGAGCGG	ATACATATT	GAATGTATTT	AGAAAAATAA	ACAAATAGGG	7860
	GTTCCCGCGCA	CATTTCCCCG	AAAAGTGCCA	CGTACGTCG	ACGGATCGGG	AGATCTGCTA	7920
	GCCCGGGTGA	CCTGAGGC	GCCGGCTTCG	AAAGCCAGA	GTAACCTTTT	TTTTTAATT	7980
30	TATTTTATT	TATTTTGAG	ATGGAGTTTG	GCGCCGATCT	CCCGATCCCC	TATGGTCGAC	8040
	TCTCAGTACA	ATCTGCTCTG	ATGCCGCATA	TTAAGCCAG	TATCTGCTCC	CTGCTTGTT	8100
	GTGAGGAGTC	GCTGAGTAGT	GCAGCAGCAA	AATTAAAGCT	ACAACAAGGC	AAGGCTTGAC	8160
	CGACAATTGC	ATGAAGAAC	TGCTTAGGTT	TAGGCCTTT	GCGCTGCTTC	GCGATGTACG	8220
	GGCCAGATAT	ACCGCGTGCAC	ATTGATTATT	GACTAGTTAT	TAATAGTAAT	CAATTACGGG	8280
35	GTCATTAGTT	CATAGCCCAT	ATATGGAGTT	CCGCGTTACA	TAACCTACGG	TAAATGGCCC	8340
	GCCTGGCTGA	CCGCCAACG	ACCCCCGCC	ATTGACGTCA	ATAATGACGT	ATGTTCCCAT	8400
	AGTAACGCCA	ATAGGGACTT	TCCATTGACG	TCAATGGGTG	GACTATTTAC	GGTAAACTGC	8460
40	CCACTTGGCA	GTACATCAAG	TGTATCATAT	GCCAAGTACG	CCCCCTATTG	ACGTCAATGA	8520
	CGGTAAATGG	CCCGCCTGGC	ATTATGCCCA	GTACATGACC	TTATGGGACT	TCCTCTACTTG	8580
	GCAGTACATC	TACGTATTAG	TCATCGCTAT	TACCATGGTG	ATGGGGTTTT	GGCAGTACAT	8640
45	CAATGGGCGT	GGATAGCGGT	TTGACTCAGC	GGGATTTCGA	AGTCCTCACC	CCATTGACGT	8700
	CAATGGGAGT	TTGTTTGGC	ACCCAAATCA	ACGGGACTTT	CCAAAATGTC	GTAACAACTC	8760
	CGCCCCATTG	ACGCAAATGG	GCGGTAGGCG	TGTACGGTGG	GACGGTCTATA	TAAGCAGAGC	8820
	TCTCTGGCTA	ACTAGAGAAC	CCACTGCTTA	CTGGCTTATC	GAAATTAATA	CGACTCACTA	8880
	TAGGGAGACC	CAAGCTT					8897

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

50 (A) LENGTH: 8321 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

GGTACCAATT	TAAATTGATA	TCTCCTTAGG	TCTCGAGTCT	CTAGATAACC	GGTCAATCGA	60
TTGGAATTCT	TGCGGCCGCT	TGCTAGCCAC	CATGGAGTTG	TGGTTAAGCT	TGGTCTTCCT	120

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	TGTCCCTGTT	TTAAAAGGTG	TCCAGTGTGA	AGTGCAACTG	GTGGAGTCTG	GGGGAGGCTT	180
	AGTGCAGCCT	GGAGGGTCCC	TGCGACTTTC	CTGTGCTGCA	TCTGGATTCC	CGTTCAGTGA	240
	CTATTACATG	TATTGGTTC	GCCAGGCTCC	AGGCAAGGGA	CTGGAGTGGG	TCTCATACTAT	300
5	TAGTCAAGAT	GGTGTATATAA	CCGACTATGC	AGACTCCGTA	AAGGGTCGAT	TCACCATCTC	360
	CAGAGACAAT	GCAAAAGAAC	GCCTGTACCT	GCAAATGAAC	AGCCTGAGGG	ACGAGGACAC	420
	AGCCGTGTAT	TACTGTCAA	GAGGCCTGGC	GGACGGGCC	TGGTTTGCTT	ACTGGGGCCA	480
	AGGGACTCTG	GTCACGGTCT	CTTCGGCTAG	CACCAAGGGC	CCATCGGTCT	TCCCCCTGGC	540
10	ACCCCTCCTCC	AAGAGCACCT	CTGGGGGCAC	AGCGGCCCTG	GGCTGCCTGG	TCAAGGACTA	600
	CTTCCCCGAA	CCGGTGACGG	TGTCGTGGAA	CTCAGGCC	CTGACCCAGCG	CGGTGCACAC	660
	CTTCCCCGCT	GTCCTACAGT	CCTCAGGACT	CTACTCCCTC	AGCAGCGTGG	TCACCGTGCC	720
	CTCCAGCAGC	TTGGGCACCC	AGACCTACAT	CTGCAACGTG	AATCACAAGC	CCAGCAACAC	780
	CAAGGTGGAC	AAGAAAGTTG	GTGAGAGGCC	AGCACAGGA	GGGAGGGTGT	CTGCTGGAAAG	840
15	CCAGGCTCAG	CGCTCCCTGCC	TGGACGCATC	CCGGCTATGC	AGCCCCAGTC	CAGGGCAGCA	900
	AGGCAGGCC	CGTCTGCCCTC	TTCACCGGGA	GGCCTCTGCC	CGCCCCACTC	ATGCTCAGGG	960
	AGAGGGCTT	CTGGCTTTT	QCCCAAGGTC	TGGGCAGGCA	CAGGGTAGGT	GCCCCCTAAC	1020
	CAGGCCCTGC	ACACAAAGGG	GCAGGTGCTG	GGCTCAGGAC	TGCCAAGAGC	CATATCCGGG	1080
	AGGACCCCTGC	CCCTGACCTA	AGCCCACCCC	AAAGGCCAAA	CTCTCCACTC	CCTCAGCTCG	1140
20	GACACCTCTC	CTCCTCCCAG	ATTCAGTAA	CTTCCAATCT	TCTCTCTGCA	GAGCCCAAT	1200
	CTTGTGACAA	AACTCACACA	TGCTCACCGT	GCCCAGGTAA	GCCAGCCCCAG	GCCTCGCCCT	1260
	CCAGCTCAAG	GCGGGACAGG	TGCCCTAGAG	TAGCCTGCAT	CCAGGGACAC	ACCACGTGGG	1320
	TACCAACATG	TCCGGAGCCA	CATGGACAGA	GGCCGGCTCG	GCCCACCCCTC	TGCCCTGAGA	1380
	GTGACCGCTG	TACCAACCTC	TGTCCTTACA	GGGCAGCCCC	GAGAACACAA	GGTGTACACC	1440
25	CTGCCCCCAT	CCCGGGATGA	GCTGACCAAG	AACCAGGTCA	GCCTGACCTG	CCTGGTCAA	1500
	GGCTTCTATC	CCAGCGACAT	CGCCGTGGAG	TGGGAGAGCA	ATGGGCAGCC	GGAGAACAAAC	1560
	TACAAGACCA	CGCCTCCCGT	GCTGGATTC	GACGGCTCT	TCTTCCTCTA	CAGCAAGCTC	1620
	ACCGTGGACA	AGAGCAGGTG	GCAGCAAGGG	AACGTCTCT	CATGCTCCGT	GATGCATGAG	1680
	GCTCTGCACA	ACCACTACAC	GCAGAACAGC	CTCTCCCTGT	CTCCGGTAA	ATGAGTGG	1740
30	CGGCCGGCAA	GCCCCCGCTC	CCCGGGCTCT	CGCGGTGCGA	CGAGGATGCT	TGGCACGTAC	1800
	CCCCTGTACA	TACTTCCCAG	GCGCCCAAGCA	TGGAAATAAA	GCACCCAGCG	CTGCCCTGGG	1860
	CCCCTGCGAG	ACTGTGATGG	TTCTTTCAC	GGGTCAAGGCC	GAGTCTGAGG	CCTGAGTGGC	1920
	ATGAGGGAGG	CAGAGGGGT	CCCACTGTCC	CCACACTGGC	CCAGGCTGTG	CAGGTGTGCC	1980
	TGGGCCCCCT	AGGGTGGGGC	TCAGCCAGGG	GCTGCCCTCG	GCAGGGTGGG	GGATTTGCCA	2040
	GGGTGGCCCT	CCCTCCAGCA	GCACCTGCC	TGGGCTGGGC	CACGGGAAGC	CCTAGGAGCC	2100
35	CCTGGGGACA	GACACACAGC	CCCTGCCCTCT	GTAGGAGACT	GTCCTGTTCT	GTGAGCGCCC	2160
	CTGTCTCTCC	GACCTCCATG	CCCACTCGGG	GGCATGCTTA	GTCCATGTGC	GTAGGGACAG	2220
	GCCCTCCCTC	ACCCATCTAC	CCCCACGGCA	CTAACCCCTG	GCTGCCCTGC	CCAGCCTCGC	2280
	ACCCGCATGG	GGACACAACC	GACTCCGGGG	ACATGCACTC	TCGGGCCCTG	TGGAGGGACT	2340
	GGTGCAGATG	CCCACACACA	CACTCAGCCC	AGACCGGTT	AAACAAACCCC	GAACGTGAGGT	2400
40	TGGCCGGCCA	CACGGCACC	ACACACACAC	GTGACCGCT	CACACACGGA	GCCTCACCCG	2460
	GGCGAACTGC	ACAGCACCA	GACCGAGAGCA	AGGTCTCGC	ACACGTGAAC	ACTCCTCGGA	2520
	CACAGGCC	CACGAGCCCC	ACGGGGCACC	TCAAGGCCA	CGAGCCTCTC	GGCAGCTTCT	2580
	CCACATGCTG	ACCTGCTCAG	ACAAACCCAG	CCCTCCCTC	ACAAGGGTGC	CCCTGCGAGCC	2640
	GCCACACACA	CACAGGGAT	CACACACAC	GTCACGTCC	TGGCCCTGGC	CCACTTCCC	2700
45	GTGCGGCCCT	TCCCTGCAAG	ACGGATCAGC	CTCGACTGTC	CCTCTCTAGT	GCCAGCCATC	2760
	TGTTGTTTG	CCCTCCCCCG	TGCCCTCCTT	GACCCCTGGAA	GGTGCCACTC	CCACTGTCT	2820
	TTCTTAATAA	AATGAGGAAA	TTGCATGCA	TTGTCTGAGT	AGGTGTCATT	CTATTCTGGG	2880
	GGGTGGGGTG	GGGCAGGACA	GCAAGGGGG	GGATTGGAA	CACAAATAGCA	GGCATGCTGG	2940
	GGATGCGGTG	GGCTCTATGG	CTTCTGAGGC	GGAAAAGAAC	AGCTGGGGCT	CTAGGGGTA	3000
50	TCCCCACCGC	CCCTGTAGCG	GCGCATTAAAG	CGCGGCGGGT	GTGGGGTTA	CGCGCAGCGT	3060
	GACCGCTACA	CTTGCCAGCG	CCCTAGCGCC	CGCTCCTTC	GCTTTCTTCC	CTTCCTTCT	3120
	CGCCACGTTG	GCCGGGCC	TCAAAAAAAGG	GAAAAAAAGC	ATGCATCTCA	ATTAGTCAGC	3180
	AACCATAGTC	CCGCCCCCTAA	CTCCGCCCAT	CCCGCCCCTA	ACTCCGCCCA	GTTCCGCCA	3240
	TTCTCCGCC	CATGGCTGAC	TAATTTTTT	TATTTATGCA	GAGGGCGAGG	CCGCCCTGGC	3300
55	CTCTGAGCTA	TTCCAGAACT	AGTGAGGAGG	CTTTTTGG	GGCCTAGGCT	TTTGCAAAA	3360
	GCTTGGACAG	CTCAGGGCTG	CGATTTCGCG	CCAAACTGTA	CGGCAATCCT	AGCGTGAAGG	3420
	CTGGTAGGAT	TTTATCCCCG	CTGCCATCAT	GGTCGACCA	TTGAACGTCA	TCGTCGCCGT	3480
	GTCCAAAAT	ATGGGGATTG	GCAAGAACGG	AGACCTACCC	TGGCCTCCGC	TCAGGAACGA	3540
	GTTCAAGTAC	TTCCAAAGAA	TGACCACAAAC	CTCTTCAGTG	GAAGGTAAAC	AGAATCTGGT	3600
	GATTATGGGT	AGGAAAACCT	GGTTCTCCAT	TCCTGAGAAG	AATCGACCTT	TAAAGGACAG	3660

	AATTAATATA	GTTCTCAGTA	GAGAACTCAA	AGAACCCACCA	CGAGGGAGCTC	ATTTTCTTGC	3720
	CAAAAGTTTG	GATGATGCCT	TAAGACTTAT	TGAACAAACCG	GAATTGGCAA	GTAAAGTAGA	3780
	CATGGTTTG	ATAGTCGGAG	GCAGTTCTGT	TTACCAGGAA	GCCATGAATC	AACCAGGCCA	3840
5	CCTTAGACTC	TTTGTGACAA	GGATCATGCA	GAATTGAA	AGTGACACGT	TTTCCCAGA	3900
	AATTGATTTG	GGGAAATATA	AACTTCTCCC	AGAATACCC	GGCGTCCCTCT	CTGAGGTCCA	3960
	GGAGGAAAAA	GGCATCAAGT	ATAAGTTGA	AGTCTACGAG	AAGAAAGACT	AACAGGAAGA	4020
	TGCTTCAAG	TCTCTGCTC	CCCTCCTAAA	GCTATGCATT	TTTATAAGAC	CATGGGACTT	4080
	TTGCTGGCTT	TAGATCTCTT	TGTGAAGGAA	CCTTACTTCT	GTGGTGTGAC	ATAATTGGAC	4140
10	AAACTACCTA	CAGAGATTAA	AAGCTCTAAG	GTAAATATAA	AATTTTAAG	TGTATAATGT	4200
	GTAAAATAC	TGATTCTAAT	TGTTTGTGTA	TTTTAGATTC	CAACCTATGG	AACTGATGAA	4260
	TGGGAGCAGT	GGTGGATATGC	CTTTAATGAG	AAAAACCTGT	TTTGTCTCAGA	AGAAATGCCA	4320
	TCTAGTGTATG	ATGAGGCTAC	TGCTGACTCT	CAACATTCTA	CTCCTCCAAA	AAAGAAGAGA	4380
	AAGGTAGAAG	ACCCCAAGGA	CTTCCCTTC	GAATTGCTAA	GTTTTTGAG	TCATGCTGTG	4440
15	TTTAGTAATA	GAACTCTTGC	TTGCTTTGCT	ATTTACACCA	CAAAGGAAAAA	AGCTGCACTG	4500
	CTATACAAGA	AAATTATGGA	AAAATATTCT	GTAACCTTTA	TAAGTAGGCA	TAACAGTTAT	4560
	AATCATAACA	TACTGTTTT	TCTTACTCCA	CACAGGCATA	GAGTGTCTGC	TATTAATAAC	4620
	TATGCTCAA	AATTGTTGAC	CTTGTAGCTTT	TTAATTGTA	AAGGGGTTAA	TAAGGAATAT	4680
	TTGATGTATA	GTGCTTGTAC	TAGAGATCAT	AATCAGCCAT	ACCACATTTG	TAGAGGTTT	4740
20	ACTGCTTTA	AAAAACCTCC	CACACCTCCC	CCTGAACCTG	AAACATATAA	TGAATGCAAT	4800
	TGTTGTTGTT	AACTTGTAA	TTGAGCTTA	TAATGGTTAC	AAATAAAGCA	ATAGCATCAC	4860
	AAATTTCACA	AATAAAGCAT	TTTTTCACT	GCATTCTAGT	TGTGGTTTGT	CCAAACTCAT	4920
	CAATGTATCT	TATCATGTCT	GGATCGGCTG	GATGATCTC	CAGCGGGGG	ATCTCATGCT	4980
	GGAGTTCTTC	GCCCACCCCA	ACTGTTTAT	TGCAGCTTAT	AATGGTTACA	AATAAAGCAA	5040
25	TAGCATCACA	AATTTCACAA	ATAAAGCATT	TTTTTCACTG	CATTCTAGT	GTGGTTTGT	5100
	CAAACTCATC	AATGTATCTT	ATCATGTCTG	TATACCGT	ACCTCTAGCT	AGAGCTTGGC	5160
	GTAATCATGG	TCATAGCTGT	TTCTGTGTC	AAATTGTTAT	CCGCTCACAA	TTCCACACAA	5220
	CATACGAGCC	GGAAGCATAA	AGTGTAAAG	CTGGGGTGC	TAATGAGTGA	GCTAACTCAC	5280
	ATTAATTGCG	TTGCGCTCAC	TGCCCCGTTT	CCAGTCGGGA	AACTGTCGT	GCCAGCTGCA	5340
30	TTAATGAATC	GGCCAACGCG	CGGGGAGAGG	CGGTTGCGT	ATTGGGCGCT	CTTCCGCTTC	5400
	CTCGCTCACT	GAETCGCTGC	GCTCGGTGTC	TCGGCTGCGG	CGAGCGGTAT	CAGCTCACTC	5460
	AAAGGCGGT	ATACGGTTAT	CCACAGAAC	AGGGGATAAC	GCAGGAAAGA	ACATGTGAGC	5520
	AAAAGGCCAG	AAAAGGCCA	GGAACCGTAA	AAAGCCCGCG	TTGCTGGCGT	TTTCCATAG	5580
	GCTCCGCC	CCTGACGAGC	ATCACAAAAAA	TCGACGCTCA	AGTCAGAGGT	GGCGAAACCC	5640
35	GACAGGACTA	TAAAGATACC	AGGCCTTCC	CCCTGGAAGC	TCCCTCGTGC	GCTCTCCTGT	5700
	TCCGACCTG	CCGCTTACCG	GATACTGTC	CGCCTTCTC	CCTTCGGAA	GCGTGGCGCT	5760
	TTCTCAATGC	TCACGCTGTA	GGTATCTCAG	TCGCGGTAG	GTCGTTCGCT	CCAAGCTGG	5820
	CTGTGTGAC	GAACCCCCCG	TTCAGCCCGA	CCGCTGCGCC	TTATCCGGTA	ACTATCGTCT	5880
	TGAGTCCAAC	CCGGTAAGAC	ACGACTTATC	GCCACTGGCA	GCAGCCACTG	GTAACAGGAT	5940
40	TAGCAGAGCG	AGGTATGTAG	GGCGTGTAC	AGAGTTCTG	AAGTGGTGGC	CTAACTACGG	6000
	CTACACTAGA	AGGACAGTAT	TTGGTATCTG	CGCTCTGTC	AAGCCAGTTA	CCTTCGGAAA	6060
	AAGAGTTGGT	AGCTCTGTAT	CCGGCAAACAA	AACCACCGCT	GGTAGCGGTG	GTTTTTTTGT	6120
	TTGCAAGCAG	CAGATTACGC	GCAGAAAAAA	AGGATCTCAA	GAAGATCCTT	TGATCTTTTC	6180
	TACGGGGTCT	GACGCTCAGT	GGAACGAAAA	CTCACGTTAA	GGGATTTTGG	TCATGAGATT	6240
45	ATCAAAAGG	ATCTTCACT	AGATCCTTTT	AAATTAAAAAA	TGAGTTTTA	AATCAATCTA	6300
	AAGTATATAT	GAGTAAACTT	GGTCTGACAG	TTACCAATGC	TTAACATCAGT	AGGCACCTAT	6360
	CTCAGCGATC	TGTCTATTTC	GTTCATCCAT	AGTTGCCTGA	CTCCCCGTCG	TGTAGATAAC	6420
	TACGATACGG	GAGGGCTTAC	CATCTGGCCC	CAGTGTGCA	ATGATACCGC	GAGACCCACG	6480
	CTCACCCGGCT	CCAGATTAT	CAGCAATAAA	CCAGCCAGCC	GGAAAGGCGCG	AGCGCAGAAG	6540
	TGGTCTGCA	ACTTTATCCG	CCTCCATCCA	GTCTATTAA	TGTTGCCGGG	AAGCTAGAGT	6600
50	AAGTAGTTCG	CCAGTTATA	GTGGCGCAA	CGTTGTTGCC	ATTGCTACAG	GCATCGTGGT	6660
	GTCACGCTCG	TCGTTGGTA	TGGCTTCATT	CAGCTCCGGT	TCCCAACGAT	CAAGGCAGGT	6720
	TACATGATCC	CCCATGTTGT	GCAAAAAAAGC	GGTTAGCTCC	TTCGGTCCCTC	CGATCGTTGT	6780
	CAGAAGTAAAG	TTGGCCGAG	TGTATCTACT	CATGGTTATG	GCAGCACTGC	ATAATTCTCT	6840
	TACTGTCTATG	CCATCCGAA	GATGCTTTTC	TGTGACTGGT	GAGTACTCAA	CCAAGTCATT	6900
55	CTGAGAATAG	TGTATGCGGC	GACCGAGTTG	CTCTTGCCCG	GCGTCAATAC	GGGATAATAC	6960
	CGCGCCACAT	AGCAGAACTT	AAAAAGTGCT	CATCATTGGA	AAACGTTCTT	CGGGGCAGAA	7020
	ACTCTCAAGG	ATCTTACCGC	TGTTGAGATC	CAGTCGATG	TAACCCACTC	GTGCAACCAA	7080
	CTGATCTTCA	GCATCTTTA	CTTCAACCAG	CGTTTCTGGG	TGAGCAAAAAA	CAGGAAGGCA	7140
	AAATGCCGCA	AAAAAGGGAA	TAAGGGCGAC	ACGGAAATGT	TGAATACTCA	TACTCTTCTT	7200

5 TTTTCAATAT TATTGAAGCA TTTATCAGGG TTATTGTCTC ATGAGCGGAT ACATATTG 7260
 ATGTATTTAG AAAAATAAAC AAATAGGGT TCCGCGCACA TTTCCCGAA AAGTGCCACC 7320
 TGACGTCGAC GGATCGGGAG ATCTGCTAGG TGACCTGAGG CGCGCCGGCT TCGAATAGCC 7380
 AGAGTAACCT TTTTTTTAA TTTTATTTA TTTTATTTT GAGATGGAGT TTGGCGCCGA 7440
 10 TCTCCCGATC CCCTATGGTC GACTCTCAGT ACAATCTGCT CTGATGCCGC ATAGTTAAC 7500
 CAGTATCTGC TCCCTGCTTG TGTGTTGGAG GTCGCTGAGT AGTGCAGCAG CAAAATTTAA 7560
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 15 ACATAACTTA CGGTAATGG CCCGCCTGGC TGACCGCCCA ACGACCCCCG CCCATTGACG 7800
 TCAATAATGA CGTATGTTCC CATAGTAACG CCAATAGGA CTTTCCATTG ACGTCAATGG 7860
 GTGGACTATT TACGGTAAAC TGCCCCTTG GCAGTACATC AAGTGTATCA TATGCCAAGT 7920
 ACGCCCCCTA TTGACGTCAA TGACGGTAA TGCCCCGCTT GGCATTATGC CCAGTACATG 7980
 ACCTTATGGG ACTTTCTAC TTGCGACTAC ATCTACGTAT TAGTCATCGC TATTACCATG 8040
 20 GTGATGCGGT TTTGGCACTA CATCAATGGG CGTGGATAGC GGTTTGACTC ACGGGGATT 8100
 CCAAGTCTCC ACCCCATTGA CGTCAATGGG AGTTTGT 8160
 TTTCCAAAAT GTCGTAACAA CTCCGCCCCA TTGACGCAA TGGCGGTAG GCGTGTACGG 8220
 TGGGAGGTCT ATATAAGCAG AGCTCTCTGG CTAACTAGAG AACCCACTGC TTACTGGCTT 8280
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(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 8897 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

35 GACGGATCGG GAGATCTGCT AGCCCGGGTG ACCTGAGGCG CGCCGGCTTC GAATAGCCAG 60
 AGTAACCTTT TTTTTTAATT TTATTTTATT TTATTTTGA GATGGAGTTT GGCGCCGATC 120
 TCCCGATCCC CTATGGTCGA CTCTCAGTAC AATCTGCTCT GATGCCGCAT AGTTAAGCCA 180
 GTATCTGTC CCGTCTGTG TGTGGAGGT CGCTGAGTAG TGCGCGAGCA AAATTTAAC 240
 TACAACAAGG CAAGGCTTGA CCGACAATTG CATGAAGAAT CTGCTTAGGG TTAGGCGTTT 300
 TGCGCTGCTT CGCGATGTAC GGGCCAGATA TACGCGTTGA CATTGATTAT TGACTAGTTA 360
 TTAATAGTAA TCAATTACGG GGTCTTGTAC TCAAGGCCA TATATGGAGT TCCGCGTTAC 420
 40 ATAACTTACCG GTAAATGGCC CGCTCTGGCTG ACCGCCAAC GACCCCCGCC CATTGACGTC 480
 AATAATGACG TATGTTCCCA TAGTAACGCC AATAGGGACT TTCCATTGAC GTCAATGGGT 540
 GGACTATTTA CGGTAAACTG CCCACTTGGC AGTACATCAA GTGTATCATA TGCCAAGTAC 600
 GCCCCCTATT GACGTCAATG ACGGTAAATG GCCCCCTGG CATTATGCC AGTACATGAC 660
 CTATGGGAC TTTCTCTACTT GGCAGTACAT CTACGTATTAT GTGATCGCTA TTACCATGGT 720
 45 GATGCGGTTT TGGCAGTACA TCAATGGGCG TGGATAGCGG TTGACTCAC GGGGATTTC 780
 AAGTCTCCAC CCCATTGACG TCAATGGGAG TTTGTTTGG CACCAAAATC AACGGGACTT 840
 TCCAAAATGT CGTAACAACCT CGGCCCTCATT GACGCAAATG GGCAGTAGGC GTGTACGGTG 900
 GGAGGTCTAT ATAAGCAGAG CTCTCTGGCT AACTAGAGAA CCCACTGCTT ACTGGCTTAT 960
 CGAAATTAAAT ACGACTCACT ATAGGGAGAC CCAAGCTTGG TACCAATTAA AATTGATATC 1020
 50 TCCTTAGGTC TCGAGCACCA TGAAGTTGCC TGTTAGGCTG TTGGTGTGA TGTTCTGGAT 1080
 TCCTGCTTCC AGCAGTGATG TTGTCATGAC CCAAACCCCA CTGTCAGTC CTGTCACGCT 1140
 TGGACAACCT GCGTCCATCT CTTGCAAGATC TAGTCAGATC ATTGTACATA ATAATGGCAA 1200
 CACCTATCTG GAATGGTACCG AGCAGAGACCC AGGGCAGTCT CCACGGCTCC TGATCTACAA 1260
 AGTTTCCAAC CGATTTCTG GGGTCCCAGA CAGGTTCAAGC GGCAGTAGGC CTGGGACAGA 1320
 55 TTTCACACTC AAGATCAGCA GAGTGGGAGG TGAGGATGTG GGAGTTTACT ACTGCTTCA 1380
 GGGTTCACAT GTTCCATTCA CGTTGGCCA AGGGACAAAG TTGGAAATCA AACGTAAGTC 1440
 TCGAGTCTCT AGATAACCAGG TCAATCGATT GGAATTCTAA ACTCTGAGGG CGTCGGATGA 1500
 CGTGGCCATT CTTTGCTAA AGCATTGAGT TTACTGCAAG GTCAGAAAAG CATGCAAAGC 1560
 CCTCAGAATG GCTGCAAAGA GCTCCAACAA ACAATTAG AACTTTATTA AGGAATAGGG 1620

	GGAAGCTAGG	AAGAAA	ACTCA	AAACATCAAG	ATTTAAATA	CGCTTCTTGG	TCTCCTTGCT	1680
	ATAATTATCT	GGGATA	AAGCA	TGCTGTTTTC	TGTCTGTC	TAACATGCC	TTATCCGCAA	1740
5	ACAAACACACC	CAAGGGCAGA	ACTTTGTTAC	TTAAACACCA	TCCTGTTGC	TTCTTCC	TC	1800
	AGGAAC	GTG	CACCAT	CTGTCTTCAT	CTTCCC	GCC	TCTGATGAGC	1860
	TGGAAC	TGC	CTG	TGTGAA	TAAC	TTCT	CCCAGAGAGG	1920
	GTGGAAGGTG	GATAAC	GGCC	TCCAATCGGG	TAAC	CTTCC	CCAAAGTACA	1980
	GAGCAAGGAC	AGTAC	CTACA	GCCTCAGCAG	CAC	CC	GAGCTGTC	2040
	GAAACACAAA	GTCTAC	GCCT	CGAAGTCAC	CCATCAGG	CTGAG	CTCG	2100
10	GAGCTTCAAC	AGGG	AGAGT	GTTAGAGGG	GAAGT	CCCC	CACCTGCT	2160
	CCTGAC	CCC	TCC	TGGCCTCTGA	CCCTT	TTT	TCAG	2220
	GGGGTCC	CTC	AGCT	CACTT	CCC	CTC	TC	2280
	AATGTTGGAG	GAGA	ATG	AAATAAAGT	AAT	TTTG	CTCT	2340
	TCATTTAATA	ATT	ATTAT	TGTGTTTAC	CAACT	ACTCA	TTTCTCTT	2400
	AATATGTA	CAT	CCTA	AGG	TTTATA	AAA	TCATC	TTT
15	CCCTATCATC	CTCTG	CAAGA	CAGTC	TCAA	ACCC	AAGC	2520
	CCCCTGGGCC	ATGG	TAGG	AGACT	GGT	CTT	CTC	2580
	TAAGGGTGAC	AGG	TCTT	AC	GTC	AT	CCCTGAG	2640
	AATCAACAA	AGCA	AA	TCAA	AAAC	CTG	TA	2700
	AACATGATAT	AAA	AA	ACAA	TTA	AA	AAAC	2760
20	TTAAGTTCA	TCAT	GGT	TACT	GGAA	ATG	T	2820
	CAGGTACTGA	GGG	ACT	CTG	CGT	ATT	GC	2880
	TAATCCACAC	TATA	CTG	TGA	GAT	TTT	TT	2940
	AGCTGAGAGA	CAA	AT	ACT	AA	TTA	TT	3000
	CCACCCACCA	AAA	AA	CTAT	AA	AG	CC	3060
25	TTGGAAATAG	CCC	GAT	TGTC	CAA	CAAA	AA	3120
	ATTAGAATAC	CCA	ATGAGG	AA	GCT	AACT	GTG	3180
	TCTCATA	AAA	ATA	TTAC	AA	AA	AC	3240
	TCATCCATAT	AAAG	TTCA	AA	CTCA	ATG	TTAG	3300
	TCTTAGCTGG	GGG	TGGG	CGA	GTTA	GAG	GTG	3360
30	TTGGTAATGT	TCT	GTT	CTC	GTG	GGGG	TG	3420
	TACACATTAT	GCTT	CAA	AA	AA	AA	AA	3480
	GAAGAGGAAT	AAG	TAAT	AGG	CGC	AG	GG	3540
	ATAGCTACCT	GCCT	AA	TAC	GGG	AG	GG	3600
	AGGTGCTAA	CAA	AA	ACAC	TCT	GT	GG	3660
35	CTAGGAGCAC	AC	ATAC	ATAG	TTT	CC	CT	3720
	AGAATTAA	TTG	CCC	AGAC	AA	AA	AG	3780
	GGGAAGGGCA	CAT	GTA	ATG	GGG	CA	GG	3840
	CTCTCAGCTA	CTC	ATCC	ATC	CTC	TA	CT	3900
	AAGGGGTTCA	GGAG	TACTA	ACAC	CTC	CC	CT	3960
40	TCTGCTTTG	TTT	TTCTT	CAGTCAGTAC	TGGG	AA	GT	4020
	AACTACATAA	GGA	AGC	AC	GGG	AA	CAT	4080
	TTTCAA	AACT	TG	GGG	AA	GGG	GG	4140
	AAC	TG	CTC	GGG	AA	GGG	GG	4200
45	ATGAATTCTT	GGG	CCCC	GCTAGCTTCA	CGT	TTG	GG	4260
	TTCTATAGTG	TCAC	CTT	AAAT	GCT	AGAG	GTG	4320
	GCCAGCCATC	TGT	TGTT	TG	GCT	CTT	GG	4380
	CCACTGTCCT	TT	CCT	AAATAA	AA	TG	GG	4440
	CTATTCTGGG	GGG	TGGG	GGG	GGG	GGG	GG	4500
	GGCATGCTGG	GG	ATG	GGGTG	GG	CT	GG	4560
50	CTAGGGGTA	TCCC	CAC	CG	CTT	CTG	GG	4620
	CGCGCAGCGT	GAC	CG	TACA	CC	GG	GG	4680
	CTTCC	TTCT	CG	CCAC	CT	CC	GG	4740
	ATTAGTCAGC	AAC	CAT	AGTC	CT	CC	GG	4800
	GTTCCGCCC	TT	CTC	CC	TA	TTT	TT	4860
55	CCGCCTCGGC	CT	CTG	AGCTA	TT	CC	GG	4920
	TTTGCA	AAA	AA	AGT	GG	TTT	GG	4980
	AGCGTGAAGG	CTG	GTG	AGG	GG	TTT	GG	5040
	TCGTCGCCGT	GTC	CC	AAAT	ATG	GGG	GG	5100
	TCAGGAACGA	GTT	CAAG	TAC	TT	CC	GG	5160
		CAA	AAAGA	AA	GG	CC	GG	

	AGAATCTGGT	GATTATGGGT	AGGAAAACCT	GGTTCTCCAT	TCCTGAGAAG	AATCGACCTT	5220
	TAAAGGACAG	AATTAATATA	GTTCTCAGTA	GAGAACTCAA	AGAACCCACCA	CGAGGAGCTC	5280
5	ATTTCTTGC	CAAAGTTG	GATGATGCCT	TAAGACTTAT	TGAACAACCG	GAATTGGCAA	5340
	GTAAAGTAGA	CATGGTTGG	ATAGTCGGAG	GCAGTTCTGT	TTACCAGGAA	GCCATGAATC	5400
	AACCAGGCCA	CCTTAGACTC	TTTGTGACAA	GGATCATGCA	GGAATTGAA	AGTGACACGT	5460
	TTTCCCAGA	AATTGATTG	GGGAAATATA	AACTTCTCCC	AGAATACCCA	GGCGTCCTCT	5520
	CTGAGGTCCA	GGAGGAAAAA	GGCATCAAGT	ATAAGTTGA	AGTCTACGAG	AAGAAAGACT	5580
10	AAACAGGAAGA	TGCTTCAAG	TTCTCTGCTC	CCCTCCTAAA	GCTATGCATT	TTTATAAGAC	5640
	CATGGGACTT	TTGCTGGCTT	TAGATCTCTT	TGTGAAGGAA	CCTTACTTCT	GTGGTGTGAC	5700
	ATAATTGGAC	AAACTACCTA	CAGAGATTTA	AAAGCTCTAA	GTAAATATAA	AATTTTTAAG	5760
	TGTATAATGT	GTTAAACTAC	TGATTCTAAT	TGTTTGTGTA	TTTTAGATTG	CAACCTATGG	5820
	AACTGATGAA	TGGGAGCAGT	GGTGGATATGC	CTTTAATGAG	GAAAACCTGT	TTTGCTCAGA	5880
15	AGAAATGCCA	TCTAGTGATG	ATGAGGCTAC	TGCTGACTCT	CAACATTCTA	CTCCTCCAAA	5940
	AAAGAAGAGA	AAGGTAGAAG	ACCCCAAGGA	CTTCCCTCA	GAATTGCTAA	GTTTTTGAG	6000
	TCATGCTGTG	TTTAGTAATA	GAACCTCTTC	TTGCTTGTCT	ATTACACCA	CAAAGGAAA	6060
	AGCTGCACTG	CTATACAAGA	AAATTATGGA	AAAATATTCT	GTAACCTTTA	TAAGTAGGCA	6120
	TAACAGTTAT	AATCATAACA	TACTGTTTTT	TCTTACTCCA	CACAGGCATA	GAGTGTCTGC	6180
	TATTAATAAAC	TATGCTAAA	AAATTGTGTC	CTTAGCTTT	TTAATTGTA	AAGGGGTTAA	6240
20	TAAGGAATAT	TTGATGATAT	GTGCTTGAC	TAGAGATCAT	AATCAGCCAT	ACCACATTG	6300
	TAGAGGTTTT	ACTTGCTTTA	AAAAACCTCC	CACACCTCCC	CCTGAACCTG	AAACATAAAA	6360
	TGAATGCAAT	TGTTGTTGTT	AACTTGTTA	TTGCAGCTTA	TAATGGTTAC	AAATAAAGCA	6420
	ATAGCATCAC	AAATTCACA	AATAAAGCAT	TTTTTCACT	GCATTCTAGT	TGTGGTTTGT	6480
25	CCAAACTCAT	CAATGTATCT	TATCATGTC	GGATCGGCTG	GATGATCCTC	CAGCGCGGG	6540
	ATCTCATGCT	GGAGTTCTTC	GCCCACCSA	ACTTGTTAT	TGCACTTAT	AATGGTTACA	6600
	AATAAAGCAA	TAGCATCACA	AATTTCACAA	ATAAAGCATT	TTTTTCACTG	CATTCTAGTT	6660
	GTGGTTTGTG	CAAACTCATC	AATGTATCTT	ATCATGTC	TATACCGTCG	ACCTCTAGCT	6720
30	AGAGCTTGGC	GTAATCATGG	TCATAGCTGT	TTCCCTGTGT	AAATTGTTAT	CCGCTCACAA	6780
	TTCCACACAA	CATACGAGCC	GGAAAGCATAA	AGTGTAAAGC	CTGGGGTGC	TAATGAGTGA	6840
	GCTAACTCAC	ATTAATTGCG	TTGCGCTCAC	TGCCCGCTTT	CCAGTCGGGA	AACCTGTCTG	6900
35	GCCAGCTGCA	TTAATGAATC	GGCCAACGCG	CGGGGAGAGG	CGGTTTGCCTG	ATTGGGCGCT	6960
	CTTCCGCTTC	CTCGCTCACT	GAETCGCTGC	GCTCGGTCGT	TCGGCTGC	CGAGCGGTAT	7020
	CAGCTCACTC	AAAGGCGGT	ATACGGTTAT	CCACAGAATC	AGGGGATAAC	GCAGGAAAGA	7080
	ACATGTGAGC	AAAAGGCCAG	CAAAAGGCCA	GGAACCGTAA	AAAGGCCGCG	TTGCTGGCGT	7140
40	TTTTCCATAG	GCTCCGCCCC	CCTGACGAGC	ATCACAAAAA	TCGACGCTCA	AGTCAGAGGT	7200
	GGCGAAACCC	GACAGGACTA	AAAAGATACC	AGGCCTTCC	CCCTGGAAGC	TCCCTCGTGC	7260
	GCTCTCTGT	TCCGACCTG	CCGCTTACCG	GATACTGTC	CGCCTTCTC	CCTTCGGGAA	7320
	GGGTGGCGCT	TTCTCAATGC	TCACGCTGTA	GGTATCTAG	TTCGGTGTAG	GTCGTTCGCT	7380
45	CCAAGCTGGG	CTGTGTGCAC	GAACCCCCCG	TTCAAGCCGA	CCGCTGCGCC	TTATCCGGTA	7440
	ACTATCGTCT	TGAGTCCAAC	CCGGTAAGAC	ACGACTTATC	GCCACTGGCA	GCAGCCACTG	7500
	GTAACAGGAT	TAGCAGAGCG	AGGTATGTAG	GCGGTCTAC	AGAGTTCTTG	AAGTGGTGGC	7560
	CTAACTACCG	CTACACTAGA	AGGACAGTAT	TTGGTATCTG	CGCTCTGCTG	AAGCCAGTTA	7620
	CCTTCGGAAA	AAGAGTTGGT	AGCTCTTGTAT	CCGGCAAAACA	AACCACCGCT	GGTAGCGGTG	7680
	GTTTTTTGT	TTGCAAGCAG	CAGATTACGC	GCAGAAAAAA	AGGATCTCAA	GAAGATCCTT	7740
50	TGATCTTTC	TACGGGGCT	GACGCTCAGT	GGAAACGAAA	CTCACGTTAA	GGGATTTGG	7800
	TCATGAGATT	ATCAAAAAGG	ATCTTCACCT	AGATCCTTT	AAATTAAAAA	TGAAGTTTA	7860
	AATCAATCTA	AACTATATAT	GAGTAAACTT	GGTCTGACAG	TTAACATGC	TTAACATGC	7920
	AGGCACCTAT	CTCAGCGATC	TGTCTATTC	GTTCATCCAT	AGTTGCCTGA	CTCCCCGTG	7980
	TGAGATAAAC	TACGATACGG	GAGGGCTTAC	CATCTGGCCC	CAGTGCCTGA	ATGATACCGC	8040
55	GAGACCCACG	CTCACCGGCT	CCAGATTAT	CAGCAATAAA	CCAGCCAGCC	GGAAAGGCCG	8100
	AGCGCAGAAG	TGGTCCTGCA	ACTTTATCCG	CCTCCATCCA	CTCTATTAA	TGTTGCCGGG	8160
	AAGCTAGAGT	AAGTAGTTCG	CCAGTTAATA	GTTTGCGCAA	CGTTGTTGC	ATTGCTACAG	8220
	GCATCGTGGT	GTCACGCTCG	TCGTTTGGTA	TGGCTTCACT	CAGCTCCGGT	TCCCAACGAT	8280
	CAAGGCGAGT	TACATGATCC	CCCATGTTGT	GCAAAAAGC	GGTAGCTCC	TTCGGTCCTC	8340
	CGATCGTTGT	CAGAAGTAAG	TTGGCCCGCAG	TGTTTACT	CATGGTTATG	GCAGCACTGC	8400
	ATAATTCTCT	TACTGTCATG	CCATCCGTAA	GATGCTTT	TGTGACTGGT	GAGTACTCAA	8460
	CCAAGTCATT	CTGAGAATAG	TGTATGCGGC	GACCGAGTTG	CTCTGCCCG	GCGTCAATAC	8520
	GGGATAATAC	CGCGCACAT	AGCAGAACTT	TAAAAGTGCT	CATCATTGGA	AAACGTTCTT	8580
	CGGGCGAAA	ACTCTCAAGG	ATCTTACCGC	TGTTGAGATC	CAGTTGGATG	TAACCCACTC	8640
	GTGCACCCAA	CTGATCTTCA	GCATCTTTA	CTTCAACCA	CGTTCTGGG	TGAGCAAAA	8700

CAGGAAGGCA AAATGCCGCA AAAAAGGGAA TAAGGGCGAC ACGGAAATGT TGAATACTCA 8760
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AAGTGCCACC TGACGTC 8897

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